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LELAND·STANFORD·JVNIOR·VNIVERSITY

THE FINANCIAL POLICY OF CORPORATIONS

By

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"Corporate Promotions and Reorganizations," "History of the
National Cordage Company," etc.

IN FIVE VOLUMES

VOLUME III

THE ADMINISTRATION OF INCOME

STANFORD LIBRARY

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THE RONALD PRESS COMPANY
1920

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CONTENTS

VOLUME III

CHAPTER PAGE

I THE SIGNIFICANCE OF ACCOUNTING THEORY IN FINANCE 3

The basis of business policy is the science of accountancy, 3; Accountancy based on a correspondence between economic and money values, 4; Balance sheet and income account contrasted, 5; Net profits deduced by two separate sets of adjustments, 7.

II THEORY OF COMPENSATION FOR WASTING ASSETS . . . 9

Classifications of adjustments, 9; Repairs, 11; Depreciation, 14; Obsolescence, 21; The important principle of all reserves, 25; Certain objectionable accounting practices, 26.

III THE COST OF BORROWED CAPITAL 29

The problem of the use of capital, 29; Classification of payments for borrowed capital, 30; Cash discounts, 31; Interest on merchandise loans, 31; Interest on funded debt, 32; Rentals and royalties, 34; The amortization of bond discount, 37; Summary statement, 40.

IV MANAGEMENT OF SURPLUS 42

Sources of the surplus, 42; Paid-in surplus, 43; Surplus through the sale of stock at a premium, 44; Surplus through sale of capital assets at an advance over book values, 45; Surplus through reorganization, 49; Accumulated surplus from earnings, and its investment, 50.

V SPECIAL RESERVES FOR BUSINESS CONTINGENCIES . . . 54

The necessity of special reserves, 54; Classification of these special reserves, 56; Reserves for taxes, 57; Reserves for property destruction, 60; Reserves for public, unremunerative improvements, 65; Reserves for business uncertainties, 69.

CHAPTER PAGE

VI THE PRINCIPLES GOVERNING THE DISTRIBUTION OF PROFITS TO STOCKHOLDERS 72

The distribution of surplus to the stockholders a matter of policy, 72; Considerations determining dividend policy, 76; Reinvestment of surplus in the business, 77; Confidence in accounting methods, 80; Regularity in dividend payments, 82; Importance of dividend regularity, 84; Dividend regularity involves the prediction of earnings, 86; Extra dividend, 97; Bond and scrip dividends, 98; Stock dividends, 101; Property dividends, 111; Taxation of stock dividends, 112.

VII THE PRACTICAL EXPEDIENCY OF DIVIDEND DISBURSEMENTS 114

Principles of dividend distribution applied to concrete cases, 114; The small manufacturing business, 114; The small public utility, 118; The small railroad, 121; The local bank, 123; Effect of widespread ownership of common stock, 123; Principles illustrated by resolution of Union Pacific Railroad directors, 124.

VIII TREATMENT OF SINKING FUND RESERVES 125

Reasons for the existence of a sinking fund, 125; Occurrence of sinking fund, 126; Methods of operating the sinking fund, 130; Fixed reserves, 131; Varying, clearly defined reserves, 132; Reserves depending on the fluctuations of business, 133; Optional sinking funds, 136; Investment of sinking funds, 137; Serial bonds, 141; The sinking fund and permanent debt, 143

IX THE VOTING TRUST 146

Origin of the voting trust, 146; Purposes of the voting trust, 148; Chief use at time of reorganization, 150; Restriction of trustees' powers, 152; Termination, 154; Legality and value, 155.

THE FINANCIAL POLICY OF CORPORATIONS

VOLUME III

THE ADMINISTRATION OF INCOME

CHAPTER I

THE SIGNIFICANCE OF ACCOUNTING THEORY IN FINANCE

The basis of business policy is the science of accountancy, 3; Accountancy based on a correspondence between economic and money values, 4; Balance sheet and income account contrasted, 5; Net profits deduced by two separate sets of adjustments, 7.

As soon as a business has been established, the financial problems, so important in themselves at the beginning, become resolved largely into accounting problems directly pertaining to the administrative policy of an active and continuing business. This is because all values of a going business must be computed indirectly. At the time of promotion there may have been a correspondence between the economic value and the cost of the property acquired by the new corporation, but no sooner is the business under way than changes in the value of its property necessarily occur. Accountancy is the science having to do with the statement and interpretation of these changes in economic value in terms of money value. It is the science of fact underlying all questions of the financial policy of the actual operation of the corporation.

The science of accountancy is primarily a system of logic. It rests on one absolutely fundamental presupposition and three postulates arising directly out of this. The fundamental presupposition of accountancy is that all economic values can be compared with each other in terms of a common unit. This unit is money. Following upon this presupposition there are these three postulates: (1) that there can be a money value fixed to correspond with every economic value; (2) that this fixed money value changes in a definite and determinable ratio in accordance with changes in the corresponding economic value; (3) that any one economic value in a series of changes may be represented by the corresponding money value.

Accountancy is, like all mathematical sciences which assume a correspondence between number and material things, essentially abstract. It chooses to neglect all aspects and qualities of the material things with which it deals, except the mere correspondence to money value. In the same way, the science of celestial mechanics neglects every quality of its objects except forces of attraction exerted at physical points. Accountancy, in practice, seeks to fix a money value on every form of value used in business and to show what are the changes in the aggregate money values of any one business involved in the buying and selling of its stock of goods, the decay of its buildings, the growth in popularity of its trade-brands, the obsolescence of its patents, and the countless other changes which occur in the ordinary course of the operation of any business enterprise. The managers must know of these changes in terms of the corresponding money values that they may determine whether or not the business is a success, and at what points are its weaknesses and its strengths. Business success is shown by an increase in money value. This increase is the profit. Part of the profit may be withdrawn for the private use of the proprietors and part should be retained in the business as invested surplus or specifically labeled as reserves. In all this computation of profits and the amount to be withdrawn from the business, the principles governing the determination of the money equivalent of the property values of the business are of paramount importance. As these principles are the science of accountancy, one understands its importance in determining the financial policy of any business.

Accountancy leads to two modes of representing a business enterprise. One is the correspondence between the money value and the economic value of a business at any one moment of time. It is a statement of the money equivalent of the business—its net worth. In familiar terms, it is the balance sheet. The other mode of representation is a statement of the steps by which the money equivalent or balance sheet of a business at one moment of time is changed into another money equivalent at a later moment of time. It is the general income account, embodying all the increases or decreases in economic value sustained by the business during the time intervening between two balance sheets.

The balance sheet is an instantaneous photograph of the business; it presumes a balanced equilibrium between the various forces making for the increase and the decrease of the economic values of the business. It presumes a static condition; but since all business enterprise is essentially dynamic, the balance sheet can be theoretically true for only a single infinitesimal unit of time. It is thus a cross-section of the stream of the business, as the general income account is a longitudinal section between any two cross-sections or balance sheets.[1]

The balance sheet should express, so far as figures permit, the wealth represented by a business at any one moment of time. This wealth is in various forms, representing not only property actually in hand, but also the rights to receive property in the hands of others at the moment of time represented by the balance sheet. In addition, persons outside of the business probably have rights against it, represented by property being used by it. It is impossible, therefore, to reduce the wealth of a business to a list of pieces of property on hand, for any going business both owes others and is itself owed by others. Moreover, much money spent in the past has gone for intangible values, such as patent rights, franchises, trademarks, which have a very distinct economic significance, although these values are not to be counted and appraised with the same precision as pieces of material property. On the other hand, the business may be called upon to meet certain obligations, not yet due, but for which it may be liable in case of the default of someone else.

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[1] These theoretical considerations may be expressed more simply by a few symbols. Let the series $A, B, C \ldots . M$ represent the various successive economic values of any business enterprise. Their money equivalents may be represented by the series $a, b, c \ldots . m$. Now the balance sheet is merely a member of the second series expressed in some degree of fulness. The general income account is merely the difference, in money equivalents, between any two members of the second series—as $b-a=v$. v is positive if the business has resulted in a profit, negative if in a deficit.

All these intangible values and contingent liabilities should be expressed in the balance sheet, because they are all significant in determining the true wealth value represented by the business at the time. The balance sheet is thus a summary of the property and rights actually held by the business, and those which others hold against it. For the sake of clearness, the property rights owned by the business—its assets—are grouped together on one side, and the property rights held against it—its liabilities—on the other.

The general income and expenditure, or profit and loss account, represents a summary of the changes that have occurred between the times at which any two balance sheets are taken. The period is arbitrary. The unit of one year, ordinarily chosen, is used merely as a matter of convenience. Moreover, if the business varies with the seasons a period of one year includes all variations. The purpose of the income statement is to obtain a true conception of the actual net profit or loss. It involves difficult and intricate computation. From the gross revenue or receipts of the business, the direct expenses—labor, materials, rent, and the like—are first subtracted, leaving a balance which is the gross profit. This is easily computed. From this, the net profit is obtained by a series of adjustments. It is these adjustments which involve the difficulties of both accounting theory and accounting practice.

These difficulties arise chiefly in transferring intangible economic values into figures. In spite of the strictness and apparent rigidity of figures, profit or loss is at best an estimate, subject to all the inherent errors of our human judgment. The science of accountancy merely lays down general principles presumably valid in all special cases, but in the end these principles embody merely the best reconciliations possible between our ordinary business rules-of-thumb and the strict logic of a deductive science. This reconciliation between practice, as laid down by the average business man in the estimation of his profits, and the theory of absolute profit, is productive of endless confusion.

The average business man is uncritical. Profit to him represents the difference between the cost of his goods and the amount he receives for them after he has made adjustments for what he had on hand at first and what he has left. But this conception of profit is not true unless the phrase "cost of goods" is given a wider significance than is customary among many business men. The goods have cost not only what was paid for them but also what was lost in the business through handling them. The buildings, machinery, tools, and all the fixed assets have been worn and have grown less valuable during the time in which the goods were being manufactured or offered for sale; many accidents and unforeseen losses have occurred which must be included among the expenses of doing business. So that the specific cost of the goods should be augmented by a series of invisible or insensible costs which can be estimated only roughly. All this is summarized in the idea that the gross profit must be reduced by a series of adjustments in order to obtain the true net profit.

It is necessary to make two independent sets of adjustments in order to reduce the gross profit to the net profit. The first series of adjustments are those concerned with the wearing, wasting, deteriorating, and mere aging of the physical property used in the business. Every time a bobbin moves, the loom becomes a little less valuable, and the cloth which is woven costs not only the price of the cotton and the labor, but also the loss in value of the machines and buildings which were required to produce it. These losses must be computed in order to determine the actual profit; they occur in every business—manufacturing and distributing, wholesale and retail. The second set of adjustments represents the losses or the reserves required to meet the unforeseen and unpredictable contingencies that arise in every business. They include insurance, accident losses and reserves, special liabilities imposed by statutes, reserves for unprofitable improvements necessitated by the public demand. Although individually unpredictable the experience of every business has shown that these expenses and losses are certain to occur in one way or another. The remainder, after these two sets of adjustments have been made, represents the net profit from the operation of the business.

This present volume deals with the disposition of the corporate income. The succeeding chapter describes those adjustments that must be made to gross profit that are incident to the wastes of operation, and the chapter following, those adjustments that represent the unpredictable losses and special reserves. The later chapters deal with net profit and the wisdom and expediency of various ways of apportioning it.

CHAPTER II

THEORY OF COMPENSATION FOR WASTING ASSETS

Classification of adjustments, 9; Repairs, 11; Depreciation, 14; Obsolescence, 21; The important principle of all reserves, 25; Certain objectionable accounting practices, 26.

The first set of adjustments that must be made to the gross profit from the operation of a business, in order to reach the net profit, covers those losses in the physical property due to wear, breakage, and the deterioration of property that comes merely from age. These losses can and must be offset by certain deductions from earnings, else the business will, in time, destroy itself. These deductions should be of such amounts that the value of the property employed in the business is maintained, at all times, at a constant determinable value. This value is the original investment in the business increased by the actual additions to the capital and decreased by the direct losses in capital. It might be possible, and it would be more logical, if these various adjustments due to the wear and aging of physical property were classified according to their causes. Such a classification, however, would subserve but little the practical necessities of business. The important things for the business man and the accountant are: (1) the ease with which the accounting adjustments may be made; (2) the relative accuracy with which these accounting adjustments correspond to the varying changes in economic value.[1] As a result of these practical considerations, the various accounting adjustments covering the wear and aging of property may be grouped into three classes—repairs, depreciation, and obsolescence.

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[1] The entire science of accountancy is a system of logical method. As such it is a normative system of formal procedure. In such a system the form of the classification of its units is the determining category rather than the substance of

Repairs represent the costs of replacing broken and worn equipment, when it is clear that the replaced part has a relatively short period of usefulness.[2] Its cost is paid for directly out of the current earnings, and it is presumed that the basic capital of the enterprise is merely maintained, not increased, by the repair. Depreciation is a charge against earnings which represents the insensible loss in useful value of all equipment which cannot be compensated by repairs—the slow crumbling of a foundation or the insensible oxidation of an iron casting. As it cannot be directly compensated for by any specific expenditure during the current operation of the business, it must be offset by subtracting a certain amount from the gross profits. This deduction is thereafter held as a reserve to be used when the equipment is finally replaced, that is, when the foundation has entirely crumbled away or the casting entirely gone. Obsolescence is a charge against earnings required by the simple fact that tools, machinery, and similar material equipment pass out of date before their apparent usefulness has ceased, that is, before their full life has run. Like depreciation, it must be compensated by the creation of a reserve which may be drawn upon when it becomes wise to discard a still serviceable machine in order to replace it by one of more modern and efficient construction.

It will be observed that these three indirect costs or charges

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these units. The form of a classification of these units may rest either on the causes which necessitate them or else on the convenience of their use in the practical exigencies of business procedure. The first may be called the "causal" and the second the "pragmatic" form of classification.

In a causal classification of the adjustments necessary to transform gross profits into net profits the basis is: "Why is the adjustment necessary?" In a pragmatic classification the basis is: "How may the adjustment be most easily and accurately computed?" While the former may appear at first sight the more worth while—and it is, perhaps, in the strict logical theory of the science—the latter is of greater value in the practical estimation of profits, both from the point of view of a science of finance and from that of business common sense.

[2] For important comment concerning this definition, see note 4.

against profits can be estimated with varying degrees of accuracy. The costs of repairs can be exactly stated. It is known with a certainty, provided some precise method of charging repairs is adopted and the books of record are correctly kept. Experience can give a fairly accurate basis upon which to judge of the length of life of tools and buildings, but any estimate must necessarily be less accurate than the specific payments for repairs. Obsolescence can be predicted much less precisely, because a new invention may render useless machinery recently installed. Yet if a large number of machines of many kinds are used, it is probable that the so-called "law of averages" will enable the engineer of the company to estimate an average obsolescence constant with something approaching an intelligent guess. It is this difference in accuracy in determining the three charges that makes the use of this particular classification expedient.[3]

The repair charges are definite because they can be measured over a given interval of time. They should include only those replacements which are not likely to be of value beyond the period chosen for the basis of computing the earnings. This period is usually a year. We may say, therefore, that in the practical procedure of current accounting methods, the gross profits of the business should be charged directly and specifically with all replacements and repairs which are not likely to have an effectiveness beyond a single year. The classification of repairs is, therefore, a matter of engineering judgment, on the essential correctness of which the accountant is dependent.[4]

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[3] There is no intention of justifying the use of precisely these three charges due to loss of value on the grounds of ultimate truth. In an earlier note it was pointed out that the classification was pragmatic only. It does not pretend to reach causes. Yet some such classification certainly introduces clearness in the accounts by removing the confusion between accurately determined adjustments and mere approximations based on intelligent guesses.

[4] This treatment of the repair charges does not accord with the usual practice. And if this method were carried out, strictly, it would result in some rather unusual charges. A light of glass in a factory building is broken by a snowball thrown

No reserve for repairs should be created and no reserve account is ordinarily kept. If such a reserve appears to be necessary in a certain instance, it would be clear evidence that the replacement which the reserve was intended to care for had a significance beyond the single year and was therefore not a repair at all, but belonged to one of the other charges due to more permanent and fundamental deterioration of property. Even in cases where a considerable replacement must be made during the last month of the year, and both accountants and engineers are inclined to allow some of the expense to be carried over into the succeeding year, the policy is wrong. The probability is that heavy repair charges occur unevenly, so that the apparently extraordinary repairs are merely large portions of an average allowance.[5]

Furthermore the necessity of defining some unit period

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by an overstrenuous urchin. The reasoning given above would require that the replacement of the light be regarded as a true replacement and not as a repair, because its usefulness would extend beyond a year. Strictly speaking the reasoning requires that a reserve should have been set up, to which this particular replacement should have been charged. But in actual practice the cost of setting a new light of glass would be regarded as a repair and immediately charged off. It is too small to bother with. In other words, in the actual practice of business men all repairs and actual replacements that do not cost very much are considered as repairs; all that do cost a considerable amount are considered as replacements. In brief, the distinction between repairs and replacements given in the text above depends on relative time; that employed in practice depends on relative cost.

There is no doubt but that the common practice of considering as repairs all replacements of low cost, irrespective of their period of usefulness, has the great advantage of simplicity and ease of calculation. Yet it has no logical basis. The important pragmatic distinction between a repair and replacement is that the former is a charge on the earnings of a single year while the latter is a charge against the earnings of several years. The distinction is therefore one of time, and time only. It has nothing whatever to do with the cost of the installation—whether a pane of glass, a new turbine condenser or a new chimney. However, convenience is a sacred canon to the practicing accountant, and cost will probably remain as a ground for defining repairs.

[5] The net earnings of railroads during the months of April, May, and June are not accurate indices of actual conditions when the road closes its fiscal year on June 30. Less accurate are the charges to maintenance of equipment, and least accurate of all are the charges to maintenance of ways and structures during these months. If the earnings of the road have been running close to the fixed charges during the preceding ten months, the management will postpone many repairs to its freight cars until after the end of the fiscal year, and practically all the repairs to the roadbed and stations. By this evasion the entire maintenance expenses are reduced for the year and greater net earnings shown than exist. If, on the contrary, the road has been making larger earnings than it seems expedient to show, inordinate improvements, especially on the roadbed, are pressed into the late spring months, therefore increasing the total maintenance charges and decreasing the apparent net earnings. Evidence indicates that the Boston and Maine Railroad followed the former procedure during the months of April, May, and June, 1915, in order to swell its apparent earnings preparatory to a plan of financial reorganization; while the Chicago, Burlington and Quincy Railroad followed the latter procedure during the spring of 1914, in order to show lower net earnings, in view of certain wage and freight rate investigations.

requires that repairs be looked upon in their totality for the period, rather than as individual charges. If the repairs are particularly heavy in the winter months and comparatively light in the summer months, it is not only justifiable but necessary that the total for the year be determined and the monthly average be considered as the proper repair charge for each month in case it is necessary to prorate repairs on a monthly basis. This may seem arbitrary, for there is no inherent necessity that the business of a twelvemonth should constitute a unit. It is arbitrary, but all measurements based on the passage of time are arbitrary, albeit necessary. So that once the unit of time is chosen, the accountant must regard it, from an accounting point of view, as homogeneous and inviolable.

This principle applies to the first year of the business when the repairs would ordinarily involve smaller costs, quite as much as to succeeding years when the repairs would be expected to amount to larger sums. It is wrong to contend that, when the plant and equipment are new and require practically no repairs, there should be set aside a reserve to take care of excessive repairs in later years. This view is based on the assumption that the aggregate amount of repairs should be approximately the same during successive years. This presumption is not implied in the idea of a repair, nor required to give uniformity to accounting practice. A repair is a charge against earnings for a given year. The year is a unit, independent of succeeding units, and it is neither logically justifiable nor expedient to require that the repair element of costs should be made, by artificial means, more uniform from year to year than the labor or the raw material element. And even if the principle that the costs of repairs should be uniform is strictly adhered to, it is by no means certain that the first year necessarily carries the lowest repair costs. New machinery may not operate as it should; much is experimental and must be changed at the very outset; adaptations to special cases are always necessary; many legitimate repairs, like the setting of new bushings and the replacement of defective castings, are quite as likely to occur during the first year as during any other.

Depreciation, the second of the adjustments that must be made in reducing gross to net profits, is due to the slow deterioration of physical property. It is necessarily cared for by means of a reserve account. Much of the property used by a corporation cannot be kept up to its full productive value by means of annual repairs. Its normal period of full usefulness is too great, and no one part can be replaced without replacing the whole. A granite foundation begins to crumble the day it is set in place, but it is a century before the decay is noticeable and one might almost say five hundred years before its usefulness is seriously impaired. A brick building is less valuable after a year of service than when first erected, but if the proper annual repairs are made it will probably last a century. Every structure and machine has a life, even though it is constantly repaired. The foundations of a house cannot be replaced without tearing the structure to pieces, yet they slowly decay; the heavy castings of a locomotive slowly corrode, notwithstanding the frequency with which the locomotive goes to the repair shop. It is illogical and misleading to charge the cost of the entire new machine or structure to the gross profits of the year in which it is finally cast aside, for its decay has been gradual during all the years since it was installed. Rather should each year bear its proportionate burden; and in order to charge the business of each year with this proportionate burden, not to be actually expended until years afterward, it is necessary to create a fund out of current earnings which shall accumulate from year to year, in exact accordance with the imperceptible decay of the machine or structure. When the replacement finally becomes necessary, the fund will be on hand with which to defray its cost. Needless to say these reserves set aside each year must be made regularly and uninterruptedly, and, so far as human judgment permits, in exact proportion to the wearing and aging of the physical property. Under no condition should they be made to correspond to the relative prosperity of the business or the caprice of the directors. Under no conditions should the depreciation reserve be manipulated for speculative purposes,[6] or made so markedly irregular as to suggest that it was manipulated according to income or in order to avoid federal income taxes.[7]

The distinction, in theory, between repairs and depreciation is arbitrary. It depends on the length of time chosen for the unit of business. If one month is selected only those replacements which can be presumed to last for a month can be considered repairs, and all others must be replaced through

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[6] This was exactly what was done in the case of the American Can Company. The following table is significant:

Year	Net Earnings Before Depreciation	Depreciation	Bond Discount	Balance
1906	$2,534,367	$184,327	....	$2,350,040
1907	3,246,828	561,135	....	2,652,393
1908	3,111,898	405,634	....	2,706,264
1909	3,301,678	545,526	....	2,756,152
1910	3,456,537	633,565	....	2,822,972
1911	5,416,399	2,500,000	....	2,916,399
1912	7,522,932	983,886	....	6,539,046
1913	6,595,679	1,212,762	$1,050,000	4,332,917
1914	5,807,802	750,000	....	5,057,802

The most conspicuous variation was in the depreciation reserve for 1911. And this has a complete explanation. In 1911 the preferred stock had over 20 per cent accumulated dividends against it. During the year the common stock was quoted between 8⅞ and 12½—a mere speculation. The fact that the earnings were far and above any previous year was entirely and successfully obscured by making a secret depreciation charge over five times that of the average of the preceding five years and over four times that of the previous year. Consequently the net earnings after depreciation appeared about the same as the preceding years, and gave no intimation of increased value for the common stock. The "inner ring" of directors were therefore enabled to acquire large amounts of both common and preferred stocks.

During the year 1912, the large earnings of the American Can Company became matters of public knowledge and the depreciation reserve was dropped to less than a half of the preceding year. As a result the net earnings after depreciation appeared to be twice as great as before—a rise from less than $3,000,000 to over $6,500,000. As a result, too, the common stock rose from 11¼ to 47⅜, and the preferred stock from 90⅝ to 126¼.

[7] For marked fluctuations in depreciation reserve, approximating fluctuations in income, see successive earning statements of the American Shipbuilding Company, Chapter VI, note 19.

reserve funds created by monthly increments allotted out of gross earnings. If, at the other extreme, a period of ten years is chosen as the unit, the greater part of all the replacements would be classed as repairs, the charges to depreciation reserve being made only for structures having a life of more than a decade. But if the theoretical distinction between the two classes is based on an arbitrary unit of time, the practical distinction is of very great importance and under no conditions arbitrary. Once the fiscal period of the business has been selected, the accountant and the engineer, working together, have only to distinguish between replacements which have a period of usefulness less than or greater than the period chosen.

But whatever the judgment of the engineer and the accountant, and whatever the period used, the sum of the charges to repairs and to depreciation reserve will represent the sum necessary to preserve the original physical property of the business intact.[8] So that at any time the unexpended depreciation reserve ought to represent the difference in physical condition—expressed in money—between the property owned by the corporation and new property identical with it.[9] If the physical property of the corporation shows a distinct deterioration, not fully offset by the depreciation reserves, it is a clear sign that the accountants and engineers have ascribed a longer life to the property than is warranted by the facts, and on the basis of this faulty judgment have set aside inadequate reserves.

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[8] Observe that the term "physical property" is used and not "economic value"—the value of the property as an instrument of production in a system of competitive industry. Repairs and annual additions to depreciation reserve merely maintain the physical property at a constant wholeness. They do not maintain the economic value of the property. To do this requires an obsolescence reserve accumulated in the same way as the depreciation reserve. This is discussed in the later paragraphs of this chapter.

[9] Observe again the word value is not used, because the word would imply economic value. By "physical condition" used above, is meant the usefulness for the original purpose. Another wording of the same sentence would therefore be: the unexpended depreciation reserve ought to represent the difference in usefulness (for the original purpose for which the plant was built) between the present plant and a new one identical with it.

Certain kinds of property may be maintained at their full physical condition by means of a constant and uninterrupted series of repairs and replacements without any reserves for depreciation. Such property must meet the following conditions:

1. It must be easily divisible into small parts.
2. The parts must be uniform, that is, all of a kind.
3. The number of such parts must be very large in the aggregate amount.
4. The parts must be of such a nature that the repair or replacement of any one of the parts does not affect the usefulness or the life of the property as a whole.

In brief, the property must consist of many uniform distinguishable and physically separable units. The roadbed of a large railroad system alone of all the property likely to be owned by a corporation meets these conditions, although even then not perfectly. If we presume that the life of ties, taking a specific example, is seven years, and if the railroad corporation replaces one-seventh of the ties each year, that part of the roadbed represented by ties is fully maintained. And if the life of a steel rail, under a given set of conditions, is ten years and the railroad replaces one-tenth of its rails, each year, this item, too, is fully maintained. Repairs to the ballast and gravel bed itself are not so easily adjusted by this method and all the other expenses of maintenance of a railroad's way are kept up with difficulty except through depreciation reserves.

If the entire value of a roadbed consisted of ties and rails, which meet the conditions of being uniform separable units, it would be practically true that the railroad's way could be fully maintained without depreciation reserves, even though the life of the units far exceeded the period chosen by the railroad for its fiscal unit.[10] It may also be contended that freight cars and even locomotives meet the conditions, so that a railroad may fully maintain its movable equipment by annual replacements. This presumption would be valid if the quantity of the equipment were sufficient, so that the process of discarding and renewal would be regular and constant, at no step involving dislocation to any part of the railroad service. The writer would be inclined to admit the principle for small, standardized freight cars of large railway systems, but to deny the principle when applied to movable equipment in general. It is not conceivable that the number of locomotives, for illustration, could ever be so large that the coming and going of a single one would be of negligible importance to the system.[11] The principle ought not, in any manner, to be applied to a railway property as a whole.[12]

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[10] It has been contended, in opposition to the view expressed above, that, as no replacements would be necessary during the first year or immediately after the construction of the roadbed, a depreciation reserve must, of necessity, be set aside to care for the years when the ties and rails would become useless all at once, like the "one-hoss shay." This observation is undoubtedly valid, theoretically, but practically it has no significance, as railroad roadbeds usually "grow" in a very true sense. Laid at first with light rails and poor ties, they are gradually improved by the substitution of heavier material. But this substitution is gradual. All of the trunk lines in the country are in a state of equilibrium in which each year a proportionate number of ties and rails must be replaced. And, provided there were nothing else to be considered, the roadbed could be kept up indefinitely by making just these replacements.

[11] The Interstate Commerce Commission, in the original system of accounting, allowed the railroads of the country to use their individual discretion as to whether or not they should maintain depreciation reserves for movable equipment. Some did; some did not—and strong and weak roads belonged to each group. Subsequently the Commission ordered that all railroads should keep depreciation reserves on the different classes of movable equipment, but did not prescribe the amounts. Variations are remarkable. The Rock Island, during the years of its greatest trial, set aside a reserve of approximately ¼ per cent on freight cars, based on the presumption that a freight car would live four hundred years! The depreciation reserve on freight cars of the Pere Marquette rose from $67,105 the year of the receivership, to $1,003,512 the year next after. Clearly, the mere fact that depreciation reserves are set aside for rolling stock is of merely theoretical significance. The practical question is: "What is the proper amount?" For brief discussion, see Volume I, Chapter V. The whole subject, so far as railroad accounting is concerned, narrows itself down to a distinction, in individual cases, between expenditures which are merely repairs—maintenance in the ordinary usage—and expenditures which are actual additions to property—improvements in the ordinary usage. The distinction between maintenance and improvements is the crux of all accounting systems for public service corporations, and the Interstate Commerce Commission in its successive "instruction" circulars covering the uniform system of accounts for interstate railroads, has struggled manfully to establish certain lucid and logical grounds of distinction. The accountant, Stephen Little, who conducted the momentous investigations into the accounting systems of the Reading, Baltimore and Ohio, and Atchison systems prior to their reorganizations did much to establish railroad accounting on a firm basis. Later William Mahl, Comptroller of the Southern-Union Pacific Railroad system, devoted much attention to organizing railroad accounting along practical, logical lines. And as a whole, long before the Interstate Commerce Commission undertook to establish a uniform system of accounting, our American railroad accountants had developed a sound accounting policy which fitted well the

When writers seek to apply the principle that property not consisting of many uniform units can be fully maintained by annual repairs and replacements alone, they seek to set aside a fundamental characteristic of physical property on the one hand, and a basic principle of accountancy on the other. One of the most fallacious applications of the principle has recently been made to the property of a public service corporation.[13] It was contended that after a given period, as the various and multiform equipment of a traction or

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peculiar problems of our own system of transportation. To the rigid insistence of the pioneers of railroad accounting that maintenance charges be liberal and that there must be a real addition to property before an expenditure shall be considered an improvement, is due the relatively low capitalization of our American railroads. For general discussion of this subject, see the numerous accounting series circulars published by the Interstate Commerce Commission from 1909 on, covering the prescribed system of uniform accounting. Note particularly the various bulletins in which specific practical questions are answered. (Accounting Bulletin No. 4, for example.) For earlier discussions, see Greene, T. L., "Railway Accounting," 7 Pol. Sci. Quar. 598 (1892); Berg, W. G., "The Distinction Between Repairs and Improvements," 35 Ry. Age 578 (1903); "Depreciation in Railroad Accounting," 43 Ry. Age 728 (1907); Delano, F., "The Application of a Depreciation Charge in Railroad Accounting," 16 Jour. Pol. Econ. 585 (1908); Calvert, J. F., "Depreciation in Railway Accounting," 6 Jour. of Acc. 229 (1908); "The Necessity of Depreciation Reserves," 48 Ry. Age Gaz. 1297 (1910).

[12] In one notable instance this opposition of opinions concerning railway depreciation came clearly into view. The master who had been requested to report on questions of fact in the notable Minnesota Rate Cases (Simpson v. Shepard, 230 U. S. 352, [1913]) found that of a railroad's property "everything on and above the roadbed depreciates from wear and weather stress. The life of a tie is from eight to ten years only. Structures become antiquated, inadequate, and more or less dilapidated. Ballast requires renewal, tools and machinery wear out, cars, locomotives, and equipment, as time goes on, are worn out or discarded for newer types." Nevertheless the master believed this depreciation to be fully offset by appreciation, saying that "the roadbed was constantly increasing in value . . . it becomes solidified, embankments and slopes or excavations became settled and stable and so the better able to resist the effects of rain and frost. . . . A large part of the depreciation is taken care of by constant repairs, renewals, additions and replacements, a sufficient sum being annually set aside and devoted to this purpose so that this, with the application of roadbed and adaptation to the needs of the country and the public served, together with working capital . . . fully offsets all depreciation and renders the physical properties of the road not less valuable. . . ."

The Supreme Court refused to accept this interpretation that maintenance and appreciation fully offset all depreciation. "It would seem," said Justice Hughes, "to be inevitable that in many parts of the plant there should be such depreciation . . . and when an estimate of value is made on the basis of reproduction new, the extent of existing depreciation should be shown and deducted." Simpson v. Shepard, 230 U. S. 352. Besides the Supreme Court decision cited above see, Shepard v. Nor. Pac. Ry. 184 Fed. 765; 29 Pol. Sci. Quar. 57 (1914). Most of the Supreme Court decision reproduced in Ripley, W. Z., Railway Problems, 642 (1913).

[13] Geijsbeek, J. B., "Fair Return to Public Utilities," 17 Jour. Acc. 245 (Apr. 1914). This article refers back to a pamphlet published by Allison, J. G., commissioner and chief engineer of the St. Louis Public Service Commission. Other writers have adopted a similar view and certain decisions of some of the public service commissions have been vitiated by the same false accounting postulate. These commissions have been unwilling to allow a utility such a gross income as would permit of maintaining a depreciation reserve. The doctrine has even worked into the views of the courts where the effort has been made to show that "appreciation" fully compensates depreciation. See preceding note.

lighting company had begun to wear out, many repairs and replacements would be necessary. This is undeniably true. But further it was contended that, as the age of the plant increased, the ordinary repairs and replacements would gradually take the place of depreciation reserves, and finally such reserves could be dispensed with altogether. Without commenting on the psychological bias of public service company operators when confronted with the advisability of replacing a complete alternating current unit by a new one and charging the expenses to the repairs of a single year, one has only to observe that the adherence to such an accounting principle would be disastrous for all concerned—the creditors of the business, the stockholders, and the public. The business itself would suffer through unequal fluctuations in net earnings because of necessarily unequal allowances for repairs.[14] The stockholders would suffer because of the greater uncertainty of the costs of operation and therefore greater irregularity in dividend payments. The public would suffer from two results—the greater difficulty in securing capital for public service enterprises, due to the greater fluctuations of their net earnings, and the poorer service owing to the probable unwillingness of managers to make costly replacements as early as high efficiency would require. In the end, a final reckoning comes, in which no one gains.[15]

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[14] An engineer writing in support of the necessity of a full and liberal depreciation reserve for traction companies remarked: "Since the renewals do not occur at the same time for all parts of a property, an electric railway after beginning operation is never equipped throughout with a new plant. Therefore there is a difference between the first cost of the depreciable plant and a depreciated value estimated for the same plant on the physical condition after years of use." Jackson, W. B., "The Depreciation Problem," 37 An. Am. Ac. Pol. Soc. Sci. 39 (Jan. 1911).

[15] The consequences have been well stated from an engineer's point of view:

"Where, either through want of foresight or lack of earning capacity of the property, those having in charge the well-being of an electric railroad have not seen to it that appropriate assets have been accumulated to care for the depreciation of the plant, it means that one of three conditions will arise when the time finally arrives when the replacements on account of depreciation *must* be made: Money must be borrowed, on the strength of the future earning capacity of the road, to cover the cost of the replacements (such borrowings being gradually liquidated from the earnings of the road), while at the same time a keen eye is kept on the care of depreciation for the future; or the property may be forced into the hands of a receiver; or it may be possible to do what is indefensible under the conditions, float additional stock or bonds to take care of expenditure for renewals of plant

The maintenance of the physical condition of the property is accomplished through direct expenditures for small repairs and regular contributions out of earnings to a reserve fund which cares for the replacement of property having a life beyond a year. Such maintenance of property does not in the least insure the continued earning capacity or economic value of the property.[16] To accomplish this purpose an additional reserve must be created, through regular contributions from the gross earnings, which shall meet or help to meet the extraordinary replacements that may be necessary as machinery and equipment become out of date or are superseded by more efficient inventions. This is particularly true in manufacturing businesses of all kinds where competition is so keen that only by taking advantage of the most efficient machinery can the manufacturer hope to reduce his costs of production to such a level that he can do business at a profit. One of the commonest causes of failure among manufacturers is the reluctance to "scrap" machinery, still good of its kind, which has been superseded by better and faster models.

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that is already represented in capital. Failure to appreciate the inexorable law that apparatus must come to the end of its useful life has resulted in the financing of economically unsound electric railroad enterprises, and in the embarrassment of good enterprises through the distribution to the stockholders of funds that should have been held in reserve for deferred maintenance." Ibid. 37.

[16] As suggested in notes 8 and 9 of this chapter, there is a vital difference between the maintenance of the physical condition of property and the maintenance of its full economic value. The former implies that such replacements shall be made that the property is at all times of equal physical wholeness to that originally installed, or, if of less wholeness, that there exist reserves which represent the cost of bringing the present condition up to the wholeness of the original. Such physical equivalence is based entirely on cost. If a building cost $100,000 and had a life of 50 years when kept in repair, and if the corporation showed a reserve of $20,000 at the end of ten years to compensate the depreciation of the building, the corporation would meet the condition of maintaining the physical equivalent of the property. Many accountants, unfortunately, think that this is all that is required to maintain true values. But the building was originally built for no other purpose than assisting in the corporation's business. During the ten years since it was built, changes in methods of construction or of manufacturing technique may have rendered it useless for the original purpose. To consider its value as only $20,000 less than when erected is pure fiction. The sole value of the building was to assist in production, for which purpose it had an original value of $100,000; but after ten years it has merely a scrap value, because it no longer contributes to this end. Clearly it is this "value for the business," or "value as an agency of production," that gauges its true economic value. And it is this economic value which the figures of the accountant are supposed to reflect. Hence the mere physical property reserve of $20,000 should have been augmented during the ten years by additional reserves to maintain the property at its full economic value. Reserves for obsolescence may be presumed to accomplish this end.

A manufacturer may have set aside sufficient reserves to replace his old machinery when it is entirely worn out, but these reserves are inadequate to meet the cost of new machinery when there is still some life left in the old. The appearance of a new competitor with thoroughly modern equipment makes certain the failure of the long-established manufacturer.

Property may become out of date from a variety of causes. The commonest is the invention of new machinery that can do the work better or cheaper. But there are other causes not thought of at first. A sudden change in style may make thousands of dollars' worth of the lasts of a shoemaker or the patterns of a dress goods manufacturer utterly worthless. A sudden change in the public's fancy may make useless great amounts of machinery devoted to a special purpose. A notable instance of this is the case of the old American Bicycle Company, the machinery of which became practically worthless as the public's plaything changed from the bicycle to the automobile.[17] Even a change in relative labor costs may render large quantities of machinery obsolete.[18] Changes in social conditions may make it expedient to provide improved or altogether different surroundings for factories; social conditions may also require the substitution of improved public utilities; as a result the older, more obsolete facilities cease to have any value whatsoever. The ferry-boats plying between Manhattan and Brooklyn were once a public necessity and of great value. The bridges superseded the ferries and the boats had little more than scrap value. All these contingencies are bound to affect, more or less, the value and the economic usefulness of old, thoroughly sound, but antiquated equipment. To replace obsolete machinery and equipment it is necessary to provide a fund that may be drawn upon when these replacements are expedient, even though the depreciation reserve is not ample. This obsolescence reserve is therefore in addition to the depreciation reserve. It is brought into existence by deducting from the gross earnings an appropriate annual amount equivalent to the average annual rate at which machinery is superseded by newer forms.

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[17] For details see Dewing, A. S., Corporate Promotions and Reorganizations, Chap. X (1914).

[18] When the New England Cotton Yarn Company was organized, its spinning machinery consisted almost entirely of English mules, requiring skilled labor for their operation. Many of the mule spinners were Englishmen. The supply of this highly skilled labor decreased, whereas the demand for it increased. As a consequence, within a couple of years, the wages for mule spinners had risen so high, comparatively, that it was cheaper to spin coarse and medium yarns on ring frames, the operatives of which were paid the wages of unskilled labor. To meet this change of labor conditions the company was compelled, ultimately, to throw away thousands of dollars' worth of mules, having many years of usefulness remaining to them, and replace them by ring frames.

It is easy to perceive the theoretical necessity for an obsolescence reserve, but it is exceedingly difficult to determine, in practice, the appropriate annual amounts that must be set aside out of gross earnings. No one knows when a machine will become obsolete, nor the cost of the improved model which supersedes it. It is, as it seems, a guess based on a guess. And this is strictly true in a concrete case; but it is not true in the large average of cases. One must admit that it is obviously impossible to set aside a regular annual allowance so that when, at an unknown time in the future a machine of uncertain cost must be paid for, the fund will be just sufficient to meet it. But it is possible to set aside an annual allowance which will gradually create a fund from which may be drawn the extraordinary costs of replacing usable machinery by new and improved forms. The amount of this annual allowance must depend on the nature of the business. Some parts of the plant will surely become obsolete before they are worn out; some parts will not. In a central station electric light system, it is almost certain that the generating units will be superseded by more efficient models before they are worn out; it is equally certain that the copper wire will be quite as valuable for the purpose of the electric light company many years hence as it was when first installed. It may never become obsolete. Between these two extremes there is much of the equipment that will probably, but not certainly, be superseded before it is worn out, much that probably will be worn out before it becomes obsolete. The engineer is fully conscious of these probabilities. He may conclude, for illustration, that a third of the original cost of a normal central station electric system—representing such parts as wire and insulators—will not be superseded by improved forms. This part of the plant requires no obsolescence reserve. He may conclude that another third may be superseded, but that the extent cannot be predicted. Some slight obsolence reserve is required for this third, in addition to the regular depreciation reserve. The property representing the remaining third will almost surely be superseded before it is worn out, but the time will be uncertain. A very substantial reserve will be required for this portion of the corporation's property.

The illustration may be made clearer by the use of a few figures. We will suppose that the entire central station electric light system cost, new, $300,000. For the convenience of this illustration we will assume—an assumption which would have to be specifically modified in practice—that all the parts of the station have a life of ten years, and therefore are subject to a depreciation charge of 10 per cent of cost a year. For a third of the property, representing $100,000, no obsolescence reserve is required. In the case of the second third, representing property costing $100,000, some obsolescence reserve is required. Let us assume that the engineer believes that this property, as a whole, should be replaced after nine-tenths of its life is gone. This represents a loss of one-tenth of the original cost for every nine (not ten) years of life—$10,000 every nine years, or $1,111 a year. This is the obsolescence reserve. Similarly the engineer might infer that the remaining third of the property should be discarded, on an average, when about three-quarters of its normal, predictable life of ten years is gone. This is a loss of $25,000 every seven and a half years or $3,333 a year. Hence the obsolescence reserve for the entire plant would be $4,444 a year, or 1.48 per cent. In other words, $4,444, or about 1½ per cent of the original cost, must be deducted from gross earnings each year, in addition to the depreciation allowance, to represent the fact that parts of the equipment must be discarded before the depreciation reserve has accumulated sufficiently to care for their replacements. This fund, built up from annual appropriations of $4,444 a year, will make up the deficit in the depreciation reserve. The engineer cannot foretell the specific parts of the equipment that will draw from this fund, but he does believe that the average demands upon the fund will be balanced by the annual appropriations from earnings. He is concerned not with the individual replacements, but with the gross average.

There are no undisputable canons of accountancy requiring that just three charges of repairs, depreciation, and obsolescence be made against gross earnings in order to reach the net earnings of the business.[19] The fundamental principle is that earnings cannot be considered as net earnings, as real earnings, until there is assurance that the economic value of the property of the business, as evidenced by power to earn, has not declined during the period in which the earnings are being made. The capital fund employed in the business must remain intact. Were it possible, as in a railroad roadway, to maintain the capital intact by regular and incessant replacements, then this problem would not be a problem for the accountant. The engineer would merely determine the maintenance expenditures and report the actual payments. But capital cannot ordinarily be maintained in this manner. Some reserves must be set aside for the simple reason that the life and the usefulness of physical property neither corresponds with, nor is commensurable with, the fiscal year of the corporation. There is, therefore, the imperative necessity that some artificial but nevertheless accurate means be taken to safeguard the maintenance of the property. Depreciation and obsolescence reserves are the best means yet devised. Their pragmatic necessity is their justification; other reserves may be necessary in some cases, but these reserves are necessary in all cases.

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[19] One could not, with an understanding of its practical uses, allege that the science of accountancy is governed by a rigid system of principles and classifications, such as pertain to the physical sciences. Like all systems of formal logic, it is pragmatic. It is a normative and not a mathematical science. To meet the requirements of its conditions, that accounting principle is best which enables the accountant to record and the reader to interpret the true picture of the economic values of the business expressed in money values. The business itself is the reality—the accountant's statements are merely an imperfect projection of that reality. If one entry is so described that the accountant and the interpreter of his accounts are able to say of it "that is exact" and of another entry "that is an intelligent guess," the accounts go a long way toward being both clear and true. Clearness, in the sense of being susceptible to but one interpretation, and truth, in the sense of expressing a money value for an economic value that is exact within a predictable limit of error—these are the ideals of accountancy.

Certain objectionable practices have crept into the treatment of depreciation charges that call for condemnation whatever theory of accountancy one accepts. Foremost, because the least logical, is the practice of assuming that the payments to the sinking fund of a corporation's bonds will offset the depreciation and obsolescence reserves.[20] When the practice is followed there are seldom[21] any other allowances for the wasting and aging of capital, so that the presumption must be made that the payment of a certain proportion of the outstanding bonds balances the losses in value of the property of the corporation not provided for directly through repairs. The decrease in bonded debt through the operation of the sinking fund means a decrease in outstanding liabilities, and the wasting and aging of the property, not compensated for by repairs, means a decrease in assets. Provided, therefore, the one were always equal to the other, there would be no objection to the practice. But the two are never equal.[22] They arise from absolutely different causes. The sinking fund is maintained to safeguard the market value of the bonds or facilitate refunding them. There is no conceivable connection between the amount demanded by the investment banker as an adequate sinking fund allowance and the rate at which the property of the corporation grows old and useless. In practice, the sinking fund is a certain percentage of the bonds. Made universal, it would imply that the larger a corporation's debt, the more rapidly its property would decay and become out of date. This is nonsense. Furthermore, as the sinking fund increases, the debt gradually decreases in amount and with it the sum that must be paid into the fund each year. This implies that the wasting and aging of a corporation's property grow less as the corporation grows older—again nonsense.

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[20] For example, this was done by the American Hide and Leather Company. The sinking fund appropriation must be $150,000 par value of redeemed bonds and the interest on the bonds in the sinking fund. This total appropriation increases slightly from year to year, and in that way is preferable to the vast majority of sinking-fund-depreciation accounts which grow smaller as the debt grows less. No attempt is made, however, to correlate the sinking fund with depreciation, except the following statement in the annual report:

"The charge to Profit and Loss Account in respect of the appropriation for Sinking Fund for the past year, together with interest on the Bonds in this Fund, has been $365,637.59 and, as usual, this, in conjunction with the outlay on Replacements and Repairs, is considered as taking the place of any specific provision for Depreciation." 1915 A. H. and L. Co. Rep.

[21] The writer has examined many income accounts where this pernicious practice was followed and fails to find a single one where there are specific charges to income that would take care of what is called here obsolescence. Most of the reports did not even attempt to justify the practice by suggesting, as did the report of the American Hide and Leather Company, referred to in the preceding note, that the sinking fund appropriations have a correspondence to adequate annual depreciation reserves. The statements examined covered manufacturing, public service, and retail distributing businesses.

Another objectionable practice in connection with depreciation is that of allowing new construction to offset the various charges which we have called here depreciation and obsolescence. The sinking fund payments are regular and certain and as such correspond to the regularity and certainty of the decay of physical property. But new construction has not even this advantage of being regular and certain. During periods of pronounced business activity there will be large amounts of construction, during periods of depression little or none. From the corporation's point of view, it is very convenient to allow the charges to depreciation only during years of pronounced activity and large profit, but such a method gives a false picture of the business and is therefore wrong.

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[22] As stated by an accountant: "The questions of sinking fund payments for the retirement of debt obligations and of provisions for depreciation have no more relation in principle one to the other than the payment of any other liability has to maintenance charges." Ludlam, C. S:, "Treatment of Sinking Funds," 17 Jour. of Acc. 175 (March, 1914).

A third bad practice, tolerated quite extensively by public service accountants, is based on the theory that depreciation can be cared for by setting aside a certain proportion of the gross earnings of the business.[23] Clearly the aging and wasting of a large proportion of the equipment of the business[24] bears little relation to the amount of business done, and less to the amount of gross profits. Carried to the extreme it would mean that when the corporation earned no gross profits, its property would neither age nor wear out.

Clearly the difficulty with these various methods of meeting depreciation and obsolescence lies in the fact that some standard of computation is chosen which is independent of the value of the equipment that wastes and grows old. Hence all attempts to make one set of essentially independent values dependent on the other, are wrong, and lead to inconsistencies and false accounting.

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[23] For illustration, the Southern Illinois Light and Power Company is required by a provision in its mortgage indenture to expend annually 8 per cent of gross earnings on maintenance. The practice has been acknowledged by public utility commissions. In one notable case, that of the United Railroads of San Francisco, a state commission ordered "that for the present the company should maintain a depreciation reserve of not less than 8 per cent or more than 10 per cent of the gross revenues." Re Financial condition of the United Railroads of San Francisco, Railroad Commission of California, Case No. 610 (Decided May 17, 1915).

[24] It has been contended that the wear and depreciation of steel rails depends solely on use. Granting this, which seems improbable, it is clear that the constantly recurring need for substituting heavier for lighter rails has nothing to do with wear. It is indeed difficult to find any equipment which declines in economic value solely in proportion to the amount of use, so that its decline in value would be in any sense a function of use as reflected in the volume of gross earnings.

CHAPTER III

THE COST OF BORROWED CAPITAL

The problem of the use of capital, 29; Classification of payments for borrowed capital, 30; Cash discounts, 31; Interest on merchandise loans, 31; Interest on funded debt, 32; Rentals and royalties, 34; The amortization of bond discount, 37; Summary statement, 40.

According to the notation used in the foregoing chapter, gross profits represent the mere difference between the total receipts for the goods sold and the total expenditures involved in their production and sale. Net profits represent the gross profits of the business after there have been made deductions for repairs and such deterioration of equipment and intangible property as is due to use and age. So described, net profit is the surplus left after the direct outlays have been paid and the capital brought up to the same point of value as it was at the beginning. It does not take into consideration the amount of capital involved; nor does it distinguish between the capital owned by the proprietors of the business and that borrowed from outside sources.

To reduce net profits to an amount which the directors may use in estimating surplus earnings available for special and general reserves and for distribution among the stockholders as dividends, a further adjustment is required, that shall involve the apportionment of the net profits between the actual proprietors of the business and those who have lent capital. The business must earn enough net profits to pay its interest charges before there shall be any remainder either to put back into the business or to distribute to the stockholders. Interest on borrowed capital is therefore the first charge against net profits.[1]

Payments for borrowed capital usually enter into the business in five different ways. There are discounts given and taken on merchandise sold and bought, for the payment of cash before the bill is actually due. There are interest charges paid to the banks in the form either of interest or of bank discount. There are interest charges paid to the public in the form of bond and note interest. There are direct charges against profits arising from the use of other people's property, tangible and intangible, which take the form of rentals and royalties. Lastly there are interest charges indirectly paid by selling bonds at less than their par value, a procedure which requires throughout the life of the bond an annual charge to bond discount. These five forms of payment will be discussed separately.[2] Individually and collectively they represent those deductions from business net profits which must be made in order to obtain a stockholders' surplus, which shall represent the balance remaining to the proprietary owners of the business for which there are no direct ouside claims.

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[1] The question may easily arise regarding the wisdom or authority of employing the terms "net" and "gross profits" in exactly the senses that has been done here. Profits are considered net before interest is deducted for these reasons: (1) The relative amount of owned and borrowed capital is merely an accident of the amount of their own capital proprietors of a particular business care to or are able to invest in the business. It has, therefore, no relation to the business as such. (2) It makes possible the comparison of the earnings of different businesses in the same or different lines of enterprise, without intricate adjustments for different interest rates and without having the conclusions affected by the question of whether or not interest is a part of cost. (3) The use is strictly logical. And this logic is strictly in accord with the distinction between profits and interest, recognized by all students of political economy.

Moreover, the use of net profits, recognized here, is in accord with a similar usage recognized in connection with railway earnings many years ago. "Net earnings are properly the gross receipts less the expenses of operating the road to earn such receipts. Interest on debts is paid out of what thus remains—that is, out of net earnings. Many other liabilities are paid out of net earnings." St. John v. Erie Ry., 10 Blatch. 279; 22 Wall. 136 (1874).

[2] The correspondence between the use of such terms as "rent," "interest," and "profits," in strict economic theory, in practical business, and in what may be called a scientific interpretation of corporation accounts, is by no means clear. Historically both economic theory and scientific accountancy borrowed their terms from the sphere of practical business. Each sought to develop a logically consistent set of terms, approximating, but by no means agreeing, with the usages of daily business intercourse. Confusion resulted, made even worse as each theoretical economist and each accountant, who has concerned himself with the foundations of his science, has sought to clarify his terms by introducing new shades of meaning.

If the cash discounts given and taken exactly balance, it will indicate that no adjustments to net profits are necessary, because the corporation is lending its capital to its customers or borrowing capital from its creditors. In case cash discounts are taken by the corporation in an amount in excess of those taken by its customers, there must be an adjustment to show that the corporation earned something by financing the merchandise stocks of its customers. This amount should be shown clearly as an addition to net profits and not as a part of net profits, because the amount represents a kind of banking profit, inherently different in character from the profit obtained through the ordinary conduct of the business. Similarly, if the discounts taken are less than those given, the difference should be shown as a deduction from net profits to indicate that some of the apparent net profit was made by using the capital of the corporation's creditors. The important point to be noted is that the discount adjustment in the general income statement should be made after the net profit has been computed. Any other method, especially that of regarding discounts as a part of either sales or purchases, leads to confusion in computing the total cost of the capital employed by the business.

Bank discount as interest paid for the carrying of merchandise loans is more clearly defined. Like cash discount, it should represent an adjustment to the net profits. Ordinarily it is a deduction, as the company has, presumably, borrowed from its banks. But it sometimes happens that the corporation has been amply provided by its stockholders with capital, so that it may receive interest from its bank deposits. Clearly this would be an addition to net profits, and should be shown as a banking profit, and not as a profit from the ordinary conduct of the business.

It is equally clear that interest paid on the public debt of the company should be a direct charge against net profits and not a mere incidental deduction from the gross profits as it has sometimes been regarded. Similarly if the corporation has, like the American Sugar Refining Company, or the express companies, large loans to other companies, the interest on these loans is an addition to the net profits of the business. This is true, even when the interest is received from another corporation engaged in a similar line of business, as dividends received by one railroad on the railroad stocks held in its treasury. There is difficulty, sometimes, in distinguishing between income from subsidiary companies, which may rightly be incorporated in a general summary of gross and net profits, and the dividends received from other corporations partly or wholly under the control of the large corporation. The distinguishing test, which should indicate whether or not the dividends or profits of a subsidiary or allied company are to be regarded as parts of the net profits of the parent's business or additions to the net profit, is the amount of control exercised over the subsidiary and the closeness with which the two businesses are connected.[8] If the parent company has absolute control over the subsidiary, whose separate existence is a mere legal fiction—the same officers, the same plant, the same books in fact—then it is perfectly proper to amalgamate the two systems of accounts and deal with the total net profit or loss as one item.[4] Thus it would be wrong for the United States Steel Corporation to pretend that its ore-carrying and smelting companies are other than mere subsidiaries of its main organization, or that their profits are additions to its own profits. On the contrary, it would be equally wrong for the American Express Company, the second largest stockholder in the New

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[8] This statement is strictly true whether the subsidiary is merely another corporation of the same kind doing the same business, or a corporation of a different kind whose business is secondary to and contributory to that of the main corporation. In the former case the separation may be for merely legal reasons. Thus the laws of Texas require a railroad operating in that state to be incorporated there. It is therefore strictly correct to consolidate the accounts of the main road and the subsidiary, since the two constitute, for all purposes of financial analysis, one and the same corporation. In the latter case, when the subsidiary is only a subordinate of the main company, it keeps a separate set of books, merely because the businesses are different. During the summer and autumn of 1917 many public utility companies especially in the Middle West (notably the Detroit Edison Company) purchased coal mines in order to insure themselves against a threatened coal famine. Thereafter the apparent earnings of the public utility could be manipulated at will, by shifting the prices and conditions of purchase under which the mining subsidiary billed its coal to the parent public utility. Obviously the only fair way would be to consolidate the profit and loss accounts of the two. Perhaps the mine, in addition to supplying the parent with coal, also sold coal on the open market. In this case an entirely separate and distinct profit and loss account must be kept for the mine (provided the price charged to the parent was the same as that charged to the outside customer), because then the mine was standing on its own feet, as an independent concern, and its success or failure should be evidenced by its own accounts.

The important question is this—does the subsidiary stand alone, as an independent business? If it does, the profit of the subsidiary should enter the profit and loss account of the parent as a receipt for loaned capital, that is, as a direct and clearly labeled addition or subtraction from the net profits of the main business.

If the subsidiary is not independent, then the profit and loss accounts should be merged. In this case a loss suffered by the independent subsidiary must be regarded as a charge against the subsidiary's own surplus, or, if this is inadequate, against the investment account of the parent.

[4] The most exhaustive and elaborate system of accounts that attempts to separate the sources of income in accordance with this principle of the closeness of control and interdependence of corporations is that of the Union Pacific, about 1909. The Union Pacific Railroad derived its profit from six types of companies (besides its own railroad running from Omaha to Ogden), whose financial and operating conditions were in various degrees of closeness to the parent company.

1. Accounts consolidated, so that there is a single profit and loss account; assets and liabilities consolidated so that there is a single consolidated balance sheet.
    (a) Fundamental parent: Union Pacific Railroad. Council Bluffs, Iowa (Omaha) to Ogden 1,101 miles, together with the branches operated as a single operating unit, 3,390 miles. This is the fundamental operating and financial nucleus.
    (b) Auxiliary companies:
        (1) Oregon Short Line Railroad. Ogden to Huntington, Ore., with branches, 1,178 miles.
        (2) Oregon Railroad and Navigation Company. Huntington, Ore., to Portland, with branches, 1,143 miles. Two large railroad systems the stock of which is entirely (except a few shares) owned by the Union Pacific Railroad. Operated, from the point of view of the company, separately, but the operations consolidated with those of the parent before presenting to public.
    (c) Proprietary companies. Utah and Northern Railway, Columbia River and Oregon Central, etc. In all, 17 small corporate entities, parts of the Union Pacific Railroad or its two auxiliaries, the corporate independence of which is retained for legal or other reasons.
2. Accounts independent. Income comes into the treasury of the Union Pacific Railroad as interest on invested capital.
    (a) Investments, entirely controlled and owned: Oregon and Washington Railroad, Central Idaho Railway, Union Pacific Coal, and a variety of small corporations.
    (b) Investments, entirely controlled, but only partially owned: St. Joseph and Grand Island Railroad, Southern Pacific Company, and other smaller corporations.
    (c) Investments, partly controlled and partly owned: Chicago and Alton Railway, Kansas City Terminal, Illinois Central.
    (d) Investments, over which the parent has little control and owns only a small part of the outstanding securities—investments, strictly speaking, although in many cases the parent profits by close traffic agreements: Atchison, Topeka and Santa Fe; Baltimore and Ohio; Chicago and Northwestern; Chicago, Milwaukee and St. Paul; New York Central and Hudson River Railroad.

1910 U. P. R.R. Rep. 26, 31-34.

York, New Haven and Hartford Railroad, to pretend that the railroad's profits, if such there are, should be regarded as a part of the net profits of the express business.

Payments for discounts, bank and bond interest, are payments for the use of that form of capital which is represented by money. But in addition to using money of others a corporation may use specific forms of property or rights to property, or may, in its turn, allow others to use property of its own. Money is paid, ordinarily, for this leased property. It is either in the tangible form of real estate, leased machinery, rolling stock, or even whole railroads, or else in the form of rights to the use of property, such as rights of way over land, the use of a side-track, the exercise of franchise privileges, or the rights to manufacture goods under established patents.

It is clear that in the vast majority of cases, rentals for the use of tangible property are in all respects identical with interest payments except in the control or administration of the hired property. A corporation may either buy a piece of land giving in payment borrowed money for which thereafter it must pay interest, or else it may lease the same land for a term of years for which thereafter it must pay rental. From the point of view of the corporation's general income account, choice between paying interest or rental is merely a question of business expediency. Similarly, with certain forms of a railroad's rolling stock, the question whether the equipment is bought outright or merely hired resolves itself into a question of the cost of hiring money or paying daily car rentals—a problem primarily of the money market.

When a corporation hires a large piece of property it is sometimes arranged that rental be paid during a period of months or years, but the corporation retains the privilege of buying the property outright at a prearranged price. This is done so that the leasing corporation may have an opportunity, by their own management, of testing the value of the property.[5] When the property leased is of large value and its earning power subject to abrupt and unpredictable fluctuation, the rentals are sometimes arranged on the basis of the independent earning power of the leased property. Especially is this practice common if, as in the case of railroads, a separate and independent record may be kept of the amount of business which the leased line brings the main road,[6] or of the earnings arising from the operation of the leased line alone.

A closely connected and very perplexing question often arises when a corporation organizes or acquires a subsidiary and, to secure sufficient money for the latter, utilizes its own credit by guaranteeing the interest on the securities of the subsidiary, and at the same time leases the property of the subsidiary. If the subsidiary fails to earn sufficient to meet its own charges, the parent must meet the deficit either by direct payment or in the form of payment of unearned rentals. Ordinarily, corporation accountants are inclined to charge this deficit directly to the general surplus—as they would an unpredictable or unusual loss. But there may be a deeper question involved—the subsidiary is bought or built for a strategic purpose, often far more significant than the hope of profit from its earnings.[7] The existence of the subsidiary is a mere legal subterfuge, the truth of the matter being that the parent found it expedient or simpler to get capital by this means. The deficit of the subsidiary is not a loss in the strict sense, but a difference between the actual earning power of the capital invested in the subsidiary's property and the cost of that capital as determined by the market price of money and the credit of the parent company judged in terms of its guarantee. In other words, the deficit of the subsidiary is really a cost of capital, and therefore a kind of rental charge. At what point this loss must be deducted from the general profit and loss account of the parent must be determined by the circumstances of the relations between the two corporations, but ordinarily it must be looked upon as a "cost of capital" charge analogous to a rental.

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[5] After the last reorganization of the International Cotton Mills Corporation, the new management decided that the heavy debt on the old Mt. Vernon-Woodberry group of mills made it inexpedient to assume the ownership of these mills directly. Accordingly they leased them until such time as they could ascertain whether or not they were worth their own mortgage debt. Early experience showed this to be untrue and the Mt. Vernon-Woodberry bondholders took over their mills and operated them separately from those owned directly by the International Corporation.

[6] The Grand Trunk Railway owns over two-thirds of the outstanding capital stock of the Central Vermont Railway. The Grand Trunk guarantees to meet any bond interest deficit up to 30 per cent of the total amount of the receipts from traffic interchanged between the two roads.

[7] The Western Pacific was built by the Denver and Rio Grande for the primary purpose of giving the Gould lines a terminal on the Pacific.

Rentals paid for the use of property rights are in some respects different from those paid for the use of tangible property. These rental costs will vary greatly according to the nature of the business. In manufacturing businesses sometimes royalties cover water rights, power sites, or easements, but more frequently they represent royalties for the use of patents.[8] Frequently a company is organized whose only asset is the ownership of a patent and its only receipts the royalties paid by one or more companies manufacturing under the license of this patent.[9] In the case of public utility companies these payments are for the use of other companies' rights of way and easements, for rights under "break down" contracts, and, in some cases, rights under previously granted franchises.[10]

A rental representing both payment for the use of property and property rights together is that exacted for licensed machinery.[11] The rental of the machinery is far greater than could be exacted on the basis of a fair return on the actual cost of manufacture, the greater part being represented by a return on the patent rights. The rental value of such exclusive patented machinery is determined not by the cost of producing the machinery itself, but by the economy to the users.[12] And conversely, if the corporation receives an amount for the use of its patents or other exclusive privileges such receipts should enter the accounts as additional receipts, supplemental to the regular income and expenditure of the business.[13]

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[8] One of the most notable contracts involving payment of rentals for patent rights (royalties) was that of the General Electric and Westinghouse Electric and Manufacturing companies for the joint use of the patents of the two companies.

[9] Some of the subsidiaries of the United Shoe Machinery Company are of this description.

[10] The use of the term "royalty" in connection with the payment for minerals extracted by mining companies is objectionable, causing a confusion of meaning with the term as used for payments under patent licenses. The mineral royalty represents the sale of tangible physical property, whereas the patent royalty is the rental for the use of a property right.

[11] The actual cost of manufacturing a Goodyear welting machine is probably not over a thousand dollars. The United Shoe Machinery Company charges 6 cents a pair "royalty" or rental for the use of that machine, so that in the extreme case

From what has been said it seems clear that the various costs incident to the use of the capital of others in a business should be considered together as deductions from net profits and should not be treated as expenses of the business. From every point of view except the method of payment, cash discounts, bank interest, interest on funded debt, and rentals, are the same. All should, therefore, be regarded as the cost of using other's capital, not the cost of operating the business. Similarly, from the other side, receipts from cash discounts, interest allowed by the bank, and dividends and interest received from securities, should be regarded as an addition to, and not as a part of, the net profits of the business.

The cost of capital is frequently paid indirectly through the sale of securities at a discount.[14] This discount has the

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of an operator turning out 300 pairs a day the rentals on the single machine would amount to $18 a day, or over $5,000 a year. Obviously only a small proportion of this is represented by interest on physical capital.

[12] From the point of view of economic theory such royalties are of the nature of true economic rent—a scarcity rather than a cost value.

[13] The question might arise as to the treatment of receipts from the use of patented or licensed machinery or other property rights. Obviously, as in a case like the United Shoe Machinery Company, where the chief, perhaps the only major income, is from such licenses, there is no question of the place at which such receipts enter the profit and loss account, as they contribute about all the receipts there are. The whole organization represents a kind of renting business. But in other instances in which such receipts are merely incidental to the main business, it is clear that they should enter the profit and loss account in conjunction with other income received from the use of the business's capital by others. Thus, the International Harvester Company permits its competitors to manufacture certain patented machines under licenses. This is a considerable source of income, but it is incidental to the main business of manufacturing and selling machinery on its own account. Such receipts should, therefore, be brought into the accounts as a part of the total receipts from loaned capital.

[14] "The Issue of Stock Below Par and the Sale of Bonds at a Discount," 50 Ry. Age Gaz., 1309 (1911).

same effect as an interest charge, although the bookkeeping treatment is entirely different. Bonds are sold at a discount or at a premium and this discount or premium must be written off, or distributed, throughout the years during which the bonds will remain outstanding. The problem is, in fact, a problem of the interpretation of what is implied by selling securities at a premium or a discount.[15]

Clearly an investor places a value on a corporation's bonds determined first by the demand and supply of capital as evidenced by the prevailing rates of return on fixed interest-bearing securities, and secondly by the risk or chance of loss which he believes is involved in the ownership of the particular bonds. If so inclined, any corporation could sell its bonds at par, regulating the interest rate by the public estimate of the value of its credit. The general mortgage bonds of the Northern Pacific had a value of 61 per cent, while those of the American Tobacco Company had a value of 119 per cent,[16] because the former pay the investor only 3 per cent on their par value, and the latter 6 per cent. The credit position of both bonds was about the same, a trifle less than 5 per cent. By regulating the rate of interest to the market demand for their securities, both corporations could have sold these or similar bonds at 100 per cent. A corporation whose credit is on a 5 per cent basis, may, for illustration, sell 20-year 5 per cent bonds at par. The same bonds may be sold at about 114 if they are made to bear 6 per cent, or at 88 if 4 per cent.[17] If this is borne in mind it is clear that when a corporation elects to sell its bonds for less than par it has secured throughout the life of the bond a lower rate of interest than the corporation's credit would warrant at the time the bonds were issued. For this reason the discount or deduction from par at which the bonds are sold should run through all the years that the bonds are outstanding. It should, in effect, be regarded as a kind of supplementary burden which the corporation shall be compelled to carry throughout the life of the bond, to balance a lower rate of interest than was warranted by the credit of the corporation when the bonds were originally sold. So regarded it is a deduction from the net earnings, indistinguishable in theory from the regular interest on the bonds. In practice, however, it is not paid to the holders of the bonds, but is paid into a reserve fund which will extinguish the bond discount at the time the bonds are due. Conversely, in those rare cases when bonds are sold at a premium, this premium should be employed to reduce, each year, the interest paid on the bonds by a proportionate annual instalment. When the bonds fall due the discount or the premium, according as the bonds were sold for less or more than par, will have been entirely extinguished through the annual adjustments to the bond interest disbursements.[18]

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[15] The pernicious practice has been advocated by some accountants of charging the bond discount to the earnings of a single year. Other accountants, disapproving of the practice in general, tolerate charging off a large part or even all the discount, if the year or years immediately following the issue of the bonds are abnormally prosperous. Their contention is that in this way it can be quickly and finally disposed of, so that there will be no temptation to refrain from making proper charges during years of meager earnings. For a concrete illustration of this observe the charge for the entire bond discount in the year 1913 by the American Can Company, Chapter II, note 6.

[16] October 1, 1917. By January 1, 1920, the inherent prosperity of the tobacco industry was such that the value of the Tobacco bonds had been fully maintained, but that of the Northern Pacific had declined to 56 per cent.

[17] This is only theoretically true, as the high interest-bearing bond sold at a

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premium will never quite equal the net price of the same bond bearing a low rate of interest and sold at a discount. The peculiar psychology of the investor is responsible for a general reluctance to buy a bond at a premium, since he is ordinarily unwilling to amortize the premium, and must therefore suffer an apparent loss of capital when the bond matures.

[18] In accounting practice, the following course should be pursued:

1. Bonds sold at a discount. Create a bond discount account. Debit account with entire difference, including bankers' commissions, between net proceeds of sale and par value of bonds sold. Credit account annually with the bond discount divided by number of years the bonds have to run. The balance, at each annual closing of the books, is a deferred asset, that is, is an adjusting entry on the assets side of the balance sheet. When the bonds are paid, the original debit of the bond discount account will be balanced by the sum of the annual credits, and the deferred asset entry will disappear from the balance sheet. At the time bond discount account is credited with the annual instalment, bond interest account should be debited with the same amount. The result of this will be a charge against net profit of both the interest actually paid out and the bond discount instalment as well.

2. Bonds sold at a premium. Create a bond premium account. Debit annually account with difference between the par value of the bond issue and the actual cash proceeds received, divided by the number of years the issue has to run. Credit account at time of original transaction with the difference just mentioned. At the closing of the books each year the balance of bond premium account will be shown as a liability on the balance sheet. The account itself will become balanced and the liability will disappear from the balance sheet when the bonds are paid. At the

Regarded in this light, the sale of bonds at a discount is a method for reducing the apparent interest payments, and the sale of bonds at a premium is a method of creating a reserve to help carry the interest payments. If the discount were made great enough the bonds might conceivably be sold without interest.[19] The sales of bonds at a discount and at a premium are devices for postponing or anticipating interest payments. As such they should be regarded as having the same force as direct interest charges, only the annual payments are adjustments on the company's books instead of actual disbursements of money.

At this point it may be convenient to summarize the conclusions of this and the preceding chapters. Gross profits represent the difference between the total receipts of a corporation and the total expenditures incurred by the actual conduct of its business. Net profits represent what remains of gross profits after the appropriate reductions are made for maintaining the full economic value of the plant and equipment used in the enterprise. From the net profit it is necessary to subtract the cost of all capital not owned by the corporation itself, or to add the receipts for the use of such of the corporation's capital as is employed in other enterprises. The

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same time that the bond premium account is debited with its annual instalment the bond interest account should be credited with the same amount. Consequently the charge against net profits will be the amount of interest actually paid, reduced by the bond premium instalment. In other words, the treatment of bond premium in accounting practice is exactly the converse of bond discount.

If this practice is followed the annual charge of bond interest would be exactly the same whether bonds are sold at par, at a discount, or at a premium. The assumption, however, does not consider interest on discount or premium balances which should be considered were the computations exact. Were this refinement considered necessary, the instalments could be computed on the basis of the usual sinking fund tables. Ordinarily, however, this is a superfluous and unnecessarily accurate adjustment.

Some accountants are unwilling to extinguish bond premiums through annual deductions from interest charges although they insist that the opposite practice in regard to bond discounts must be followed. Their contention is that the bond premium liability should be perpetuated as a kind of contingent reserve. Such a procedure is absolutely unsound. If extra reserves for contingencies are required by the exigencies of the business, they should be created by honest and straightforward methods. Under no circumstances should they be brought into the accounts by a deceitful subterfuge such as that of mislabeling the bond premium account.

[19] This is exactly what was done in the case of an issue of the short-term notes of the Erie Railroad.

remainder may be regarded as the surplus belonging to the corporation itself—its gain from the year's business. Out of this stockholders' surplus certain reserves may be set aside. What then remains may be distributed among the stockholders, in such a manner and under such conditions as may seem expedient to the directors. The immediately succeeding chapters deal with questions of financial policy determining the wise distribution of this stockholders' surplus.

CHAPTER IV

THE MANAGEMENT OF SURPLUS

Sources of the surplus, 42; Paid-in surplus, 43; Surplus through the sale of stock at a premium, 44; Surplus through sale of capital assets at an advance over book values, 45; Surplus through reorganization, 49; Accumulated surplus from earnings, and its investment, 50.

The term surplus" is used in so many senses and with such variations of meaning that an exact definition applicable to all cases is impossible. In all probability, however, the variations of meaning narrow themselves down to two. There is the general usage in which "surplus" means merely a margin, or leftover, not required by the business. There is, also, the strict meaning of accountancy in which "surplus" represents the balancing adjustment of a difference between debit and credit values. In either case the surplus represents an accumulation of economic values in excess of what the par value of the capital stock calls for. This accumulation of free property may have arisen from the aggregate of annual net profits not appropriated for other purposes, or it may have arisen from money paid into the corporation's treasury under special conditions.

A surplus may arise through five distinct types of transactions. It may be paid in by the stockholders directly at the beginning of the business. It may arise through the sale to either stockholders or the public of stock or bonds at a premium above the par value. It may arise through the sale of capital accounts for an amount in excess of their book value, or the value at which they are carried in the plant or property accounts. It may arise through the reappraisal or physical valuation of the assets of the company. And, lastly, it may arise through the accumulation of successive annual profits. This last is the ordinary method under which surplus arises.

The surplus is seldom paid in directly by stockholders, except in the case of the organization or reorganization of banking, insurance, or investment companies.[1] At least a moderate surplus must be shown on the balance sheet of such a company to give an appearance of strength so that its financial statement may inspire confidence. The laws of many states also require banking companies to accumulate a surplus above liabilities, which shall not be used for the payment of dividends. By subscribing this surplus at the beginning, the stockholders may draw dividends on the capital stock after the first year of business. Furthermore, at a critical time in the history of a bank or insurance company the stockholders are frequently required to subscribe to the surplus in order to maintain the unquestioned credit of the company.[2] In all such cases the surplus is regarded to all intents and purposes as a part of the capital stock. In no sense is it a reserve for dividends; and if, under extreme provocation, the directors consent to distribute a part of the paid-in surplus to stockholders, the report of their action does irreparable injury to the credit of the company.

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[1] In order to give an immediate semblance of strength, a bank is very frequently organized by stock subscription taken in excess of par. Thus, with a par value of $100 a share the stock is subscribed for at $120 a share, the additional $20 going directly into a "paid-in" surplus fund. From the very first, therefore, the statement of the bank would show a substantial surplus.

[2] A good illustration of this is afforded by the experience of a large insurance company directly after the San Francisco fire. The Hartford Fire Insurance Company had, at the time, a capital stock of $1,250,000 and an admitted surplus, above all liabilities including legal reserves for outstanding policies, of over $5,000,000. The stock with the par value of $100 was quoted at $1,200 a share. The company paid out over $7,000,000 to the San Francisco policyholders. The disbursement of this large sum, the largest ever paid by any American insurance company for a single conflagration, would have used up the surplus and seriously injured the general credit of the company. Only by maintaining this general credit untarnished could the company hope to maintain its business and recoup itself for the loss. Accordingly it sold 7,500 shares of new stock to its old stockholders for $500 a share, par value $100. This transaction increased its admitted capital stock by $750,000—from $1,250,000 to $2,000,000—and added $3,000,000 to the surplus.

When stockholders or the public buy stock of the corporation at a premium, the money paid in is in excess of the liability created by the issue of the new security.[3] Strictly speaking, therefore, it is surplus. Some of the successful Massachusetts lighting companies have large surpluses created in this way; in one or two cases the amount of premium is nearly equal to the outstanding capital stock.[4] The exact status of this premium is very difficult to define. Clearly it is capital paid into the treasury of the company to be invested in the property assets of the company, yet it does not represent an acknowledged liability to stockholders or creditors. If there exists a stock discount or other adjusting account with a balance appearing as a bookkeeping or constructive asset, which is not being extinguished by annual appropriations, it is unquestionably wise to permit the premium on securities sold to cancel this fictitious asset. In the absence of any such account the premium received from the sale of securities must be carried as a bookkeeping liability of a distinctly anomalous nature. Clearly money paid in belongs to the stockholders

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[3] The accounting problems involved, in the case of bond premiums, were treated in the preceding chapter.

[4] The Lynn Gas and Electric Company had (1919) capital stock of $1,625,000 and premium on stock of $1,476,000. Sometimes this premium on stock account may increase more rapidly than either the capital stock or the surplus account. This is shown by a tabulation of these accounts (even thousands) at one-year intervals of the Edison Electric Illuminating Company of Boston.

Year	Capital Stock at Par	Paid-in Premium on Capital Stock	Percentage of the Preceding two Items Represented by Premium
1902	$7,850,000	$1,660,000	17.4 %
1903	8,635,000	2,450,000	22.1
1904	10,444,000	4,261,000	28.97
1905	11,488,000	5,307,000	31.59
1907	11,488,000	5,307,000	31.59
1908	12,644,000	6,501,000	33.95
1909	12,644,000	6,501,000	33.95
1910	13,603,000	7,605,000	35.85
1911	15,543,000	9,840,000	38.76
1912	15,603,000	9,951,000	38.94
1913	15,603,000	9,951,000	38.94
1914	18,200,000	12,936,000	41.54
1915	20,472,000	15,553,000	43.17
1916	20,480,000	15,562,000	43.17
1917	22,518,000	17,906,000	44.29

Such conditions are unusual and are to be explained by the Massachusetts laws restricting the issue of public utility securities to less than the value of the property.

themselves and arises merely through the accident that the par value of the stock is less than what the stockholders are willing to pay for it. No more than when paid in directly as surplus, can the stockholders appropriate it in the form of dividends, and even in an extreme case they have been refused permission by public authorities to call it a capital stock liability.[5] From all points of view the issue of stock at a premium, involving the continuation of the premium as a mere liability, is undesirable. It leads to controversy and, in the end, the premium may be merged with the regular surplus account and be used most unwisely for dividend disbursements under the misleading name of unappropriated surplus.[6]

A third way in which surplus may arise is through the sale of property at a price above its cost or above the figure at which it is carried in the plant account. It is the recognized policy of corporation accounting to mark down the real estate or other tangible property if it shows a marked decrease in value, especially if this decrease is not fully compensated by depreciation or other charges. But it is not the custom, nor would it be expedient,[7] to mark up the value of tangible property solely on the basis of a fictitious or doubtful rise in valuation. But when property is actually sold at an enhanced price, the difference between this amount and the amount at which it is carried will appear immediately as a realized asset. It must be balanced off by a corresponding liability. This will be of the nature of a surplus.

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[5] The case in question was during the controversies prior to the reorganization of the Boston and Maine Railroad. The company carried, June 30, 1914, a liability entry of a little over $6,500,000, entitled "Premium on Common Stock Sold" representing an accumulation of the amounts which the common stockholders had paid into the company's treasury in excess of the par value of their shares. It was proposed that this amount be issued by the railroad as capital stock to those who might consent to make sacrifices in one or another of the proposed plans of reorganization. This was contrary to the letter of Massachusetts law and the plan was defeated.

[6] Closely connected with this form of surplus, but not of sufficient significance to warrant a separate heading, is the excess of assets arising from the purchase, by the company, of its own stock and particularly its bonds for less than par. Such a purchase cancels automatically a liability equal to the par value of the securities acquired, but involves a withdrawal or segregation of a less amount of assets. The assets are reduced by the cost of the securities, but are increased by the greater par value of the securities acquired. To establish a balance the liabilities are increased through a fictitious or bookkeeping entry on the liability side to be known as "Securities Purchase" account, or by a similarly confusing name. Such a liability must be regarded as a real surplus, although, like the previous forms discussed in the body of the text, it is not to be merged with the regular surplus and not to be appropriated for dividend disbursements.

[7] In a few noteworthy cases book values of real estate have been marked up to agree with ostensible increases in value. Sometimes, fortunately not often, this bookkeeping increase in assets has been offset by a corresponding increase in the represented surplus available for dividends, and dividends have been straightway declared out of it. Thus the old United States Realty and Construction Company, in the first nine months of its operation, showed an apparent profit—including even

There is an old canon of accounting, much revered by English accountants, that a profit and loss balance, to be available for dividends, must arise through the regular and orderly movement of the business. A surplus arising from profit realized on the sale of capital assets would not therefore be available for distribution to the stockholders. There are substantial reasons to support this policy, but their strength depends on how close is the connection between the sale of capital assets and the regular course of the business. If this connection is very close, as with a steel concern selling to the trade structural steel made for its own consumption, and if the sale of such capital assets is not an unusual incident to the course of the business, it is justifiable and expedient to bring such profit into the general profit and loss account for the year. The balance of this account is added to the general surplus account from which dividends are taken. Yet, ordinarily, when capital assets are sold at a profit the transactions are surrounded by unusual circumstances. Sometimes it is real estate that has enhanced in value;[8] sometimes it is unused building material that can be disposed of at a profit; sometimes, even, it is construction materials which are disposed of in order to obtain the advantage of a sudden and

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estimated profits on unfinished building contracts—of $930,000. It declared, however, $1,215,000 in dividends. To bridge the gap a surplus, created by marking up real estate by $487,625, was added to the net earnings. Soon thereafter the corporation had to be reorganized because of imminent failure. Dewing, A. S., Corporate Promotions and Reorganizations, 237 (1914).

[8] When the Westinghouse Electric and Manufacturing Company moved from its old location, certain Garrison Alley, Pittsburgh, real estate was sold at a profit of $84,205 above what it was then carried on the company's books in its capital account. Yet the company, in order to show its dividend disbursements fully earned, added this to the general surplus, distributing the greater part immediately in the form of dividends.

presumably temporary rise in market value.[9] Quite generally, however, this surplus arises merely from the sale of miscellaneous capital assets at prices above that at which they are carried upon the books. This is quite usual—one might say of general occurrence—if a separate depreciation account is kept for each piece of physical equipment.[10] Nevertheless, whatever the accounting theory adopted, financial experience and general business expediency have shown that a surplus arising from the sale of capital assets cannot wisely be merged in the general corporate surplus from which dividends are taken.

The proper method for the treatment of profits arising from the sale of capital assets is to create a separate account to which is given some fictitious but sufficiently inclusive name, such as "capital surplus." In this account should be entered all gains arising through the sale of capital assets or the accumulations from the general depreciation account arising from underestimation of the life of physical equipment. On the other hand, the fact that capital assets may be sold at a profit carries as its correlative fact the presumption that other capital assets may be sold at a loss. The fact that the life of some equipment is underestimated suggests that the life of some other equipment may be overestimated. In such cases the deficits in either the special or the general depreciation accounts must be extinguished in some reasonable manner other than through deductions from the earnings of a particular year. This capital surplus account serves as the means of absorbing all these untoward and embarrassing, but nevertheless real deficits. In brief, then, all bookkeeping or actual profits arising from the sale of capital assets should be held as a reserve to be used in extinguishing all extraordinary deficits attributable directly to losses in the capital accounts. Otherwise these losses must be carried forward as fictitious assets or else taken over into the regular surplus. The former method leads to misrepresentation and, in extreme cases, disaster; the latter method introduces confusion into the general surplus arising from the normal conduct of the business.[11]

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[9] The Boston and Maine Railroad, at one time during its mismanagement, bought rails for replacements. A sudden rise in the price of steel rails led the management to sell these purchases.

[10] In that case some pieces of equipment will surely outlast their estimated life. When they are finally sold the amount realized will represent a kind of fictitious profit, the original cost having been obliterated through annual depreciation charges. They have outlasted their theoretical life and the amount realized from their corpses will be surplus. And if no separate depreciation accounts are kept a widespread and long-continued underestimation of the life of equipment will result in the accumulation of a bookkeeping balance in the general depreciation account which the management may call surplus.

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[11] The misfortune resulting from not having a surplus reserve account to absorb extraordinary and unforeseen capital losses is illustrated by the experience of the New York, New Haven and Hartford Railroad in the year ending June 30, 1914, the year before the Great War, and so presenting no abnormal conditions.

PROFIT AND LOSS ACCOUNT

Credit

Balance brought forward from June 30, 1913		$ 7,916,557.24
Credit balance of net income for the year		268,662.87
Balance in Insurance Funds transferred to this Account		1,983,354.67
Adjustment of securities to par value		123,720.53
Miscellaneous Items		25,863.55
		$10,318,158.86

Debit

Dividend paid September 30, 1913	$2,356,768.50	
Loss resulting from the sale of securities of the Merchants & Miners Transportation Co.	3,594,500.00	
Unamortized loss on the New York, Westchester & Boston Ry. Co. bonds, which bonds were received in payment for advances to the New York, Westchester & Boston Ry. Co. and the bonds sold to the public by the New Haven Company prior to the past fiscal year	1,265,295.62	
Loss on Treasury securities sold or reduced to par	426,361.37	
Depreciation on equipment assigned to the Boston & Albany R. R. prior to July 1, 1913, under "Boston & Albany Equipment Trust of 1912"	237,108.36	
Depreciation prior to July 1, 1913 on equipment put out of service	130,070.61	
Franchise and other taxes at Grand Central Terminal prior to July 1, 1913	111,592.57	
Rental, Grand Central Palace, N. Y., for station facilities during construction of permanent station buildings, charges accruing prior to July 1, 1913, the amount not determined until recently	83,686.43	
50% of net charges to Profit and Loss made by the Boston & Albany R. R., assumed by the New Haven Company under agreement to share equally in the net results of the operation of the Boston & Albany, which agreement was cancelled as of January 31, 1914	71,749.81	
Miscellaneous charges	218,779.45	8,495,912.72
Balance June 30, 1914, as per balance sheet		$ 1,822,246.14

Putting this briefly, and in even figures, the New Haven Railroad started July 1, 1913, with a surplus of $8,000,000 accumulated from the previous annual profits of the railroad business. After allowing inadequate maintenance charges, Another way in which a surplus may enter the books of account is through the readjustment or reorganization of a corporation's financial structure, or through the direct and explicit purchase of one corporation's assets by another. In other words, a surplus sometimes arises through the accounting adjustments incident to the organization of a new corporation. Sometimes a new company takes over the going businesses of several smaller companies. For these smaller companies a smaller par value of stocks, bonds, and notes is paid than the actual amount of the assets acquired. The new corporation does not want to mark down these assets, especially if it conducts a public utility business, so that it must set up a fictitious bookkeeping liability which assumes the nature of a surplus.[12] A similar situation arises when a corporation organizes a subsidiary to take over property that hitherto had not entered the books of account as assets or even as property values. This is true when a coal mine disposes of its waste "dust" theretofore considered of no value, or when a chemical industry organizes a subsidiary to use up, at a profit, some by-product theretofore regarded as valueless.[13]

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and totally insufficient depreciation charges on its equipment (2 per cent, for example, on steam and electric locomotives—50 years of life), the year showed a profit of $270,000 out of direct corporate revenue of $74,000,000. By transferring certain funds and adjustments to the credit of profit and loss the company was able to show a bookkeeping surplus of $10,000,000. Out of this it paid $2,350,000 in dividends, approximately ten times the admitted legitimate earnings of the year, and charged off $6,000,000 of miscellaneous losses, mostly from operation covering capital losses. The capital losses of this one year extinguished the surplus accumulations of over forty years of business.

[12] For example, a corporation was organized to assume the property and operation of five separate electric light companies in Texas. These companies were bought at a low price. Preferred and common stocks were paid for them directly or else sold for money and the money paid over to the original owners. As a result of the transaction the new corporation found itself with property which had originally cost the previously existing utility companies considerably more than its own issues of stock. In order to justify the rates charged to the consumers of its electricity it preferred not to mark down the physical property. Accordingly the new corporation constituted a surplus on its books, to offset the difference between the value of the physical property and the amount of its issued stocks. This was sound procedure, provided the origin of the surplus was clearly acknowledged and remembered. But the evil consequence, in this particular case, showed itself during the following two years of poor business, when the company paid preferred stock dividends out of this surplus. Ultimately the company failed.

[13] An excellent illustration of this is an attempt made, several years ago, by the antecedent of the present Central Leather Company, to create a bookkeeping surplus out of the fictitious sale of capital assets to a subsidiary corporation created for the purpose. The old United States Leather Company acquired large tracts of timber land in 1893. Ten years later, 39 per cent in dividends having accumulated on

Still again the surplus account has been, in certain notorious cases, manipulated up and down by the arbitrary increase or decrease of the capital stock. Needless to remark, the decrease of capital stock, and the coincident increase of surplus out of which dividends are declared, is nothing but an indefensible accounting misrepresentation made to obscure the payment of dividends out of capital.[14]

There remains, then, of the various sources of surplus, one and only one which may give rise to that surplus from which dividends may be disbursed. This is the surplus arising

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$62,000,000 of preferred stock, the directors organized a subsidiary known as the Central Pennsylvania Lumber Company. The timber lands were revalued in accordance with the increased value of timber, as a result of which it was shown that the Lumber Company could acquire certain tracts of timber, including the bark rights, without depleting the original book value of the lands as carried in the capital account of the United States Leather Company. At the same time the United States Leather Company would acquire $10,000,000 of the Lumber Company's bonds in payment for the timber taken over by it. If this transaction could be consummated this sum would suddenly come into the Leather Company's treasury—out of a clear sky, as it were. It was the Leather Company's intention to regard this $10,000,000 of bonds as a free asset, and distribute them in lieu of its accumulated dividends. Such an asset would have to be represented in the liability side of the balance sheet as surplus, or by a word of similar connotation. For details, see Dewing, A. S., "The Reorganization of the United States Leather Company," 26 Q. J. E. 68 (Nov., 1911); reprinted Ripley, W. Z., Trusts, Pools and Corporations, Chap. XI.

[14] This is exactly what was done in the notorious United Railroads of San Francisco case. The following is from the California Commission's report of the proceeding:

"While the books of United Railroads of San Francisco showing the actual entries as authorized by the board of directors are not available, the evidence clearly shows that the profit and loss account was credited with $1,200,000 because of the reduction of the capital stock, and was further credited from time to time with amounts in the sinking fund reserves. The resident partner of the firm which audits the books of United Railroads of San Francisco, defended the action of the company on the ground that the surplus or profit and loss account was a mere clearing account. If this theory were carried to its logical conclusion, there would be nothing to prevent the board of directors from increasing or decreasing the capital stock of a corporation, and thereupon charging or crediting the amount to profit and loss, and thus there could be created a surplus or deficit at will.

"To quote from the evidence:

> Question by Commission: Do you know that this $1,200,000 that you transferred into surplus under your authority was used to pay dividends?
>
> Answer by Accountant: No, sir, it was not.
>
> Q. How could you have paid dividends if you hadn't had this $1,200,000 in the surplus account?
>
> A. Well, as a matter of fact, there might have been a deficit—indeed, there was a deficit caused by our making this entry; it was necessary in order to get that deficit that something be done, and this stock was reduced.
>
> Q. Did you declare dividends—could you without the $1,200,000 being put into surplus have declared dividends?
>
> A. Why, certainly not.
>
> Q. Then you did pay dividends out of it?
>
> A. No.

"It is clear, of course, if the $1,200,000 had not been put into surplus account, the company, on its own showing, would have had a deficit." Rep. Railroad Commission California Decision No. 2397 (Decided May 17, 1917).

from the normal annual accumulations from the profit and loss accounts. It is the surplus coming directly from the profits of the business. The question of financial policy in connection with this surplus is the one of dividend expediency—the proportion of surplus that must be retained in the business as special or undefined reserves and the proportion that may wisely be distributed to the stockholders. This vital and far-reaching problem of expediency is discussed in the succeeding chapters.

A few things should be observed in passing, however, in regard to the actual treatment of the property coming into the possession of the company and called surplus. If the surplus arises through payments by security holders or through the profitable sale of capital assets it comes into the treasury as money. As such it is without earning power and should be immediately invested. Likewise if the surplus arises through mere bookkeeping balances, it stands merely for an increase in the unappropriated property of the corporation. If the corporation is a railroad the surplus stands merely for more cars or more finished roadbed than is warranted by the apparent claims of stock- and bondholders; if the corporation is a soap factory it stands merely for more soap or more grease than the liabilities of the company call for. In no case is it in a form that can be distributed in dividends or even used to meet a sudden and unpredictable demand for money.

The fact remains, therefore, that the surplus of a corporation is kept entirely in the form of actual money only in extreme cases.[15] The proportion that should remain in bank deposits and readily realizable cash items will depend on the nature of the business and the frequency or nearness of sudden cash demands. The surplus of certain corporations, notably insurance companies, is of the nature of a trust fund which must be kept inviolable to meet unforeseen demands. Preparation to meet unexpected losses is the very nature of the insurance business. Under most circumstances the ordinary receipts take care of the ordinary disbursements, but at the time of a conflagration the surplus must be encroached upon, since the customary reserves are insufficient. That is the reason why an insurance company should, irrespective of its theories of investment, keep a large part of its surplus invested in short-time loans or listed securities easily liquidated. Other corporations, notably railroads, need not have a single cent of their surplus in cash or easily realizable securities. There are no sudden contingencies which belong to the nature of the business, no sudden liabilities which can be liquidated only by money. And although, in the long run, the insurance business is no more hazardous than the railroad, the former is forced by its peculiar nature to regulate the investment of its surplus as if the unexpected were the expected.

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[15] During September, 1917, a corporation engaged in the grinding of corn found itself unable to secure enough raw material to maintain its grind. The factories were closed for two weeks. On October 1, 1917, the trial balance showed an enormous accumulation of cash, so large in fact as to approximately equal a bookkeeping surplus that had taken years to build up. By November 1 the cash had been reduced by grain purchases and other disbursements to normal amounts. When the company's bookkeeping surplus was represented by actual money, the company was in no stronger position than when its surplus was tied up in raw materials and semi-finished goods. In fact, its position was not so strong, because the heavy accumulations of bank deposits indicated a paralysis of the normal business operations of the company.

The great majority of businesses, such as all industrials, public utility enterprises, even most banks, should invest the surplus where the return is largest. This is in the business itself. The stockholders presume, and this presumption should be true if the business is successful, that the officials can invest the surplus in their own business better than in another of which they know next to nothing. They cannot take the surplus and invest it in open-market securities, for the reason that being engaged in a business requiring in itself careful attention to details, a close, careful attention to the stock market is the last thing that should be demanded of them. And, if led by a foolish and childish conservatism they invest their surplus in high-grade securities, such as municipal and government bonds, they are taking a lower rate of return than the money invested in their own business ought to bring; if this be not so, the business should be liquidated and the services of the officers dispensed with.

CHAPTER V

SPECIAL RESERVES FOR BUSINESS CONTINGENCIES

The necessity of special reserves, 54; Classification of these special reserves, 56; Reserves for taxes, 57; Reserves for property destruction, 60; Reserves for public, unremunerative improvements, 65; Reserves for business uncertainties, 69.

It is presumed that a surplus remains after payment of interest and similar charges incident to the use of capital. This surplus must be apportioned by the directors to special and general reserves, to dividends, and to improvements. These three allotments will represent the final disposition of the corporation's net earnings.

Theoretically speaking, the surplus remaining after the payment of interest and other capital charges belongs to the stockholders and might be entirely distributed in dividends, were the directors so inclined. Except in extreme cases this is not to be considered, and even in the extreme cases when it is possible, there is little to recommend such a policy.[1] The

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[1] For years the Boston and Maine Railroad, under the Tuttle management, paid out every cent of surplus earnings after charges, to its stockholders. The following summary of the disposition of the railroad's earnings explains itself:

Total Receipts, Including Taxes	$32,440,595
Total Operations, not Including Maintenance	17,292,060
Maintenance in Lieu of Depreciation	6,770,606
Net Earnings	8,367,929
Interest and Rentals	6,429,919
Surplus Remaining to Stockholders	$ 1,938,010
Special Reserves	....
Sinking Funds on Bonds	151,285
Dividends	1,764,359
Margin Remaining	$ 22,366

This remaining $22,366 was only one-fourteenth of 1 per cent of the total receipts and only one-third of 1 per cent of the amount appropriated for maintenance chief reason is that the computations of the accountant cannot be made with absolute accuracy, and even if these computations were accurate within the range of mathematics, they rest on the estimates of engineers, credit men, and others who are forced by the rigidity of figures to reduce variable and intangible values to money estimates. They assume that repairs have been adequate, that depreciation reserves are correctly computed, that inventories are correctly taken, that reserves against bad accounts are sufficient. Most of all they assume that nothing unforeseen is likely to thrust itself into the affairs of the corporation and cause a sudden and unpredicted fall in earnings—flood, fire, war, new taxes, confiscatory legislation, or (as with public service corporations) the sudden demands of the public for unprofitable improvements. Were accountancy perfect and its figures rigid and accurate, especially those concerning depreciation and reserves for future contingencies, then the entire surplus might be divided among stockholders with complete equanimity. But it is not. It is far less accurate than the accountant deludes himself into believing. The practical business man knows this. He takes the figures of the accountant as sophisticated guesses and directs his conduct on the assumption that the accountant has forgotten not one thing, but many things. He fortifies himself against these omissions of the accountant by refusing to distribute all earnings in dividends, reinvesting a part of the surplus in betterments and improvements. This reinvestment

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in lieu of depreciation—a mere bookkeeping balance to obscure the fact that the entire annual surplus, and possibly more, was distributed to the stockholders.

This policy was continued for many years, as is evident from the following brief summary:

Year	Total Earnings (even thousands)	Maintenance	Dividends	Annual Surplus
1902	32,441,000	5,771,000	1,764,000	22,366
1903	34,265,000	6,674,000	1,771,000	22,186
1904	35,471,000	7,124,000	1,779,000	70,456
1905	36,801,000	7,898,000	1,806,000	76,926

These were among the most prosperous years in the history of American railroads. The ultimate failure of the Boston and Maine requires no further explanation.

For a summary representing the continuation of this policy during the later years just before the failure of the road, see Chapter VI, note 7.

of a portion of the stockholders' surplus acts as a kind of safeguard against the dogmatic liberalism of the accountant.

But it frequently happens that some vague guess may be made concerning at least a part of what must be set aside from current earnings to care for future contingencies. These guesses are far less accurate than even the engineers' estimates of the life of equipment or the accountants' computations of reserves for contingent liability on discounted bills. When rigidly analyzed, the reserves set aside to protect the corporation against unforeseen events fall into four more or less vaguely defined classes. There are those reserves which must be set aside for unpredictable taxes, assessments, and special levies of governmental bodies. Such reserves are generally grouped together under the heading, "Reserves for Taxes." Second, there are those reserves which must be set aside to care for unusual destructions to physical property. Such reserves may, in a large measure, be omitted if ample insurance of every variety is carried. On the other hand, if the corporation carries its own insurance, as is done in many cases, the reserves set aside in lieu of the payment of insurance premiums come under this head. Third, reserves should be set aside to care for unremunerative expenses involved in meeting unforeseen demands of the public. Such reserves are of most significance among public service corporations likely to be confronted with demands for the elimination of grade crossings, smoke nuisance, for burying wires, or for repaving the right of way. None of these increase appreciably either the gross or the net earnings of the corporation. Lastly, a corporation may wisely set aside reserves to care for sudden and unavoidable fluctuations in the economic demand for its product, or the availability of its raw material—panics, booms accompanied by scarcity of labor, protracted business depressions. This outline of different types of special reserves is perhaps not exhaustive, nor is each of the types equally pertinent to all kinds of business. Nevertheless, practically every unforeseen contingency a corporation is likely to be called upon to meet and pay for, may be guarded against by reserves which come into one or another of these general classes. And it is much better consciously to acknowledge the possibility—even probability—of grave future difficulties and expenses, by specifically providing reserves, than it is merely to hold back earnings without facing the grounds which make such a course necessary or expedient.

Reserves for taxes do not ordinarily lead to confusion. Taxes are in part known before the period during which they accrue, and in part not. In cases like franchise taxes, excise taxes, poll taxes, they are known in advance and may be accurately apportioned. Such taxes are a direct operating expense and a discussion of them is out of place at this point. But there are other kinds of taxes which are only to be apportioned approximately; and, in unusual cases, the corporation must make reserves against the payment of taxes the amount and the principles of levying of which cannot be even vaguely guessed at.[2] It is these various unpredictable and often undetermined levies which the corporation must protect itself against, by special reserves for taxes. This account should include two kinds of reserves. One should stand for reserves for taxes certain to be levied, a customary proportion of which has been charged already against gross profits as part of the operating expenses. The other should stand for reserves for those taxes considered probable but not certain. Such instances occur when the general social or political situation indicates that new tax laws are likely to be enacted which will involve additional tax payments not included in the ordinary estimates.

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[2] The excess profits tax for the year 1918, not determined by Congress until February, 1919, was of this description.

Reserves for taxes in excess of those ordinarily charged against gross earnings, the first kind of tax reserves just mentioned, must be set aside either because the fiscal year of the corporation does not coincide with the tax year, or because an allotment for taxes is charged against the monthly gross earnings account during the earlier months of the year before the current assessments are known. Thus if the fiscal year of the corporation begins July 1, as was the case with a majority of railroads until lately, the taxes for the last six months of the railroad's fiscal year must be based on those of the full calendar year of which the railroad's year is only a part. The road must therefore set aside a reserve from its surplus to care for such cases in which it has underestimated the assessments to be apportioned to the first six months of the calendar year.[8] A similar situation arises when the corporation charges the earnings of each month with a constant amount representing one-twelfth of the estimated taxes. Also, as is often the case, a corporation may protest against an increase in certain of its tax assessments. When the matter remains unsettled or is in litigation at the close of the fiscal year, the corporation must set aside from its surplus a reserve to care for the excess payment in case of an adverse decision.

The other kind of special tax reserves arises in connection with new taxes likely to be levied, the full amount or extent of which is not manifest at the time the statement of earnings is drawn up. Ordinarily the computation of such reserves has not presented much of a problem, since new tax legislation is accomplished but slowly. Yet at certain times during a period of rapid change of the government's fiscal policy, the amount of taxes a corporation will be called upon to pay cannot be determined beforehand. This was true to some extent during the period from 1910 to 1914, when various forms of the income tax were being tried out. It was notably true during the first two months of 1919, when Congress was wrestling with the question of the excess profits tax. American corporations knew that the tax law, as ultimately to be enacted, would apply to the earnings of the previous year, that of 1918. Some Congressmen advocated an excess profits tax as high as 80 per cent, while others went on record as opposed to this general form of tax. A majority of the members of Congress stood between these two extremes, so that the corporations felt reasonably sure that some form of an excess profits tax would be included in the war revenue bill being written during late winter. But their fiscal year had already closed, December 31, 1918, two months or more before the law fixing the method of taxation for the year 1918 was passed by Congress. Under these circumstances the corporations, especially those profiting greatly because of the war, felt it necessary to set aside a considerable part of their earnings to meet the tax which they felt sure would be finally enacted. The amount was the vaguest kind of guess. But it had to be deducted from the surplus of the year, before appropriating any part for dividends. If the profits were conspicuously large compared with former years, it might be that the amount of the excess profits tax reserves would represent the largest single appropriation from the year's profit and loss surplus.[4]

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[8] For illustration, consider the case of a road having its fiscal year ending June 30, 1917. Most of its taxes are assessed on the basis of the calendar year, but the assessment and rate are probably not known until the autumn. On June 30, 1917, it has been able to determine exactly the taxes properly assessed against the earnings for the first six months of its fiscal year—up to January 1, 1917. But the corporation cannot, except on the basis of the previous year's expenses, determine those properly chargeable against the earnings of the last six months of its fiscal year from January 1, 1917, to June 30, 1917. The railroad's accountants must therefore estimate the tax reserves for this period, but the only basis for such an estimate is the experience of the year 1916. Actually the taxes levied by all governmental units increased very much in 1917 over those of 1916, due to the war conditions. It was necessary, therefore, for the road, in addition to its customary tax charges against gross earnings, to set aside a reserve from surplus to meet the additions to its estimated payments for taxes, which would become known only in the autumn of 1917, after the books for the fiscal year were closed.

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[4] A certain industrial, before 1917 regarded as only a partial success with large, preferred-stock unpaid dividends accumulated, found itself suddenly in the midst of great success. In September, 1917, prior to the passage of the revenue bill of October, 1917, the executive committee was able to estimate that the total profits for the year would amount to over $12,000,000. Ordinarily they had hardly amounted

The second large class of special reserves that must be set aside for the general surplus are those having to do with protection against unusual and unforeseen losses to property. Ordinarily such losses are carried by insurance, and the insurance premiums, like taxes, are charged directly against the gross receipts, as one of the direct expenses of the business. Under certain circumstances, however, special and somewhat unusual precautions must be taken either in addition to the regular provisions for insurance or else in lieu of the ordinary forms of insurance.

Ordinary fire insurance policies can be secured when the corporation's property consists of buildings and structures; such insurance, especially when distributed among several underwriting companies, may be relied upon as adequate provision against the hazard of fire. It is possible also for the corporation to protect itself against incidental losses occasioned by fire, such as loss of revenue during reconstruction or penalties under breach of contract to deliver finished goods. In the majority of cases, however, a corporation will not take out such insurance to protect it against these contingent hazards, because of the great expense and the difficulty of determining the conditions and adjusting the claim in cases of loss under the policy. Yet in very many businesses, reserves must be set aside for losses of just such kinds. Contracts often call for delivery of merchandise within time limits, a breach of which involves severe penalties. In case of fire it may be necessary to operate night shifts at great additional expense or else go into the market and pay premiums for the quick delivery of goods, in order to avoid the heavier

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to $2,000,000. Accordingly, as a result of the various discussions concerning dividend policy and the apportionment of earnings, the management set aside an excess profits tax reserve of approximately $4,000,000, or twice the previous total annual earnings.

Extreme cases were found among Canadian corporations. The actual mining costs of the Kerr Lake Mining Company, the operating company, for the year ending August 31, 1917, were $196,000. This included all the expenses—even development expenses, repairs, and boarding house deficit. Whereas the taxes assessed by the Dominion Government were $101,000—over a half of the costs of mining operations.

losses resulting from a broken contract. In brief, many incidental losses are possible which are not, and in many cases cannot, be guarded against by the ordinary forms of insurance.

But the largest of these reserves arises when the corporation carries its own fire, marine, or casualty insurance. Such a policy is advisable provided the property of the corporation meets the following conditions: (1) the units of property must be small; (2) they must not be physically connected; (3) the replacement of one unit must not dislocate the regular course of the business of the corporation. The rolling stock of transportation companies, even their small line stations, consists of property of this description,[5] as do the separate factories of large manufacturing concerns with widely scattered plants. Canning and preserving companies with many small plants in different parts of the area where their raw material is grown, are of this description. Grain companies, owning many small line elevators, too, meet these conditions.

It is perfectly possible for a transportation company to carry separate insurance on each one of its freight cars and passenger coaches, but it is not expedient from the point of view of the corporation, or socially wise. The purpose of insurance is to distribute unusual losses by shifting the burden from one individual to a large number of individuals. The insurance company justifies itself, economically, by supplying the clearing house and effecting the distribution of the losses.

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[5] Railroads are particularly well suited to carry their own insurance. Except for their urban terminals no single hazard amounts to much and the total annual fire losses on a single system are small compared to the total property or the total income.

Certain data concerning the experience of the New York, New Haven and Hartford Railroad in their insurance accounts bear this out. During the seven years preceding June 30, 1915, the average annual income of the New Haven Railroad (not including its allied enterprises) was $63,200,000. Its fire loss averaged $140,000 a year, or about two-tenths of 1 per cent. The year ending June 30, 1915, is probably fairly typical. The gross income was $65,379,264. There were 247 separate fires, involving a loss of $60,000, or only $243 for each fire. The New Haven's burnable property was estimated at $85,000,000. The fire loss for this year was therefore only one-tenth of 1 per cent of the gross income and less than one-tenth of 1 per cent of the total burnable property.

But when the corporation owns a large enough aggregate of individual pieces of property, so that it can itself effect a distribution of the risks and the "clearing" of the losses, it can well save the cost of the machinery of operation of the insurance company, amounting usually to at least half the ordinary premiums.[6] This can be done if the corporation charges itself the ordinary premiums, setting aside the amounts in a separate fund into which are brought all the premiums and from which are drawn all the losses. And if the nature of the corporation's physical property is such as to meet the conditions defined above—property consisting of small, separate, and relatively inexpensive units—it is probable that the corporation will, in the long run, profit from its insurance account. For, since a considerable portion of the premium is represented by the ordinary expenses of operating the insurance company, which are saved by the corporation, it will create for itself within its own insurance reserve a kind of insensible reserve which will, as soon as a considerable fund has been established, fortify it against unusual losses.[7] Outside of the fire hazard, the practice has been used, with profit, by corporations engaged in the shipping business, especially when the corporation owns a fleet of small, relatively inexpensive ships. This policy of self-insurance should, under no circumstances, be followed by corporations owning a few vessels, because sufficient distribution of risks cannot be obtained.

When the corporation undertakes to carry its own insurance it should set aside from the general surplus—certainly during the first year the practice is followed—a fund to care for extraordinary losses in addition to the regular premiums. This requirement is based on the presumption that, although the corporation will gain on its insurance account in the long run, it is likely to lose in the short run. There must be special precautions to safeguard against a sudden loss. After the system is well-established, and the accumulation of annual premiums charged against operation has created an insurance reserve sufficient to care for any normal loss, the special reserve originally set aside from the general surplus may be brought back into the general surplus or continued indefinitely as a special fund designated by such a term as "Extraordinary Insurance Reserve," "Conflagration Reserve," or "Unappropriated Insurance Reserve." Such a fund would be used to absorb any unusual losses, in case the ordinary insurance reserve should prove inadequate to cover these losses at any time.

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[6] Probably, from the point of view of the policyholder the most economical form of insurance is that against the fire hazard. At all events, under either of the well-known systems of scientific rating, there is more experience and judgment shown in fixing the fire hazard premiums than in any other form of insurance. Yet of the premium paid, approximately one-half is for adjustment of risks and the other half for commissions, overhead and other expenses incidental to the conduct of the business.

[7] Needless to say, the mutual company is based on this presumption of economy. But it is successful only when operating in property meeting the conditions heretofore described—many units of small size, widely separated. As a matter of empirical observation the permanently successful mutuals are, for the most part, those which meet these conditions, such as farm mutuals, and mutual companies insuring factories within a single industry.

Perhaps the most conspicuous case in which a reserve for the fire hazard should be set aside directly from the general surplus is when the corporation owns forest property that cannot be insured. This is very important with paper and tanning companies owning their own woodlands. Ordinarily wages of fire wardens and rangers would be a direct charge to operation. But this kind of protection is not enough, especially if the corporation has a considerable proportion of its assets invested in timber lands. True, a reserve could not be set aside compatible with the premiums that a fire insurance company would feel compelled to charge on timber property,[8] but some regular appropriation based on the cost of the stumpage must be set aside; else losses resulting from forest fires will be direct capital losses. Unless the corporation is fortified in some other direction such an unprotected loss may seriously affect the corporation's solvency.[9]

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[8] For the reason that the fire hazard of growing timber is so difficult to rate—so affected by the "moral hazard"—all fire companies are unwilling to write timber risks without charging an extremely heavy premium. This makes it out of the question for the corporation to carry timber insurance policies.

It is obviously reasonable that the special insurance reserve and the ordinary insurance reserves resulting from the accumulation of annual allotments from earnings, should under no circumstances be invested in property subject to the same hazard as the property for the replacement of which the fund is maintained. A shipping corporation, for example, carries its own insurance. As a result of this policy, $2,000,000 has been accumulated from premiums with which the corporation has charged itself, and in addition it has set aside $50,000 a year for ten years from its general profit and loss surplus to care for "war or other unusual losses." It is evident that these two funds should not be invested in any kind of property subject to the marine hazard. If the railroad corporation insures its own stations, the fund should not be invested in station property; if a grain company insures its own elevators, then the reserve is not to be placed in elevator property. This policy must be rigidly and scrupulously followed, else the whole principle of insurance reserves breaks down. And it is difficult to observe. Most business men are familiar only with their own or allied businesses, seldom with the general investment business. Moreover, if the insurance reserve funds accumulate in considerable amounts there is always a temptation to use the money for the general purposes of the corporation, where, unquestionably, it will earn more than in low interest paying, readily marketable securities.[10]

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[9] It has been suggested by some that the annual growth over a large area represents an increase of capital, which is itself a sufficient reserve against the fire hazard. This would be true only if the tracts were small and widely separated geographically, and provided the corporation made no annual cut (unless the stumpage value of such cut were charged to capital). Ordinarily, however, the loss in interest of growing timber more than counterbalances the annual growth (this is certainly true of fully grown spruce forests in New York, New England, and Southern Canada), so that an additional special appropriation from the general surplus must be made for the fire hazard. One may note in passing that the accounting of forest property is a subject fraught with hopeless confusion. Foresters have sought to prove that it "pays" to conserve timber lands, but their calculations are often in violation of the most evident principles of accounting.

[10] It is possible to study the insurance reserve fund investments of the United

The latter are the only wise media for insurance reserve investments. A desirable arrangement is about one-fourth of the fund in bank certificates of deposit payable thirty or at most ninety days from demand, one-fourth in active, listed first mortgage railroad bonds, and the other half in municipal and government securities.[11] If such an arrangement is followed, little care will need to be exercised by the treasurer of the corporation in the investment field with which he is unfamiliar, and a large proportion of the fund will be immediately realizable in cash if unusual losses make demands upon the fund.

A third set of reserves must be set aside to meet the large expenses incurred in complying with changed social and public requirements. These may be considered unproductive or unremunerative improvements. They represent the costs incident to complying with a more enlightened social consciousness, either in the direction of greater safety, greater convenience of the public, a keener social morality, or even a more critical sense of communal beauty and fitness. As a class the expenses are very numerous—ornamental street lights, fire escapes, automatic signals, "welfare" improvements, "full crew" laws, contributions to hospitals and public improvement funds. When these expenses are individually small they are merely charged against the ordinary costs of operations and require no further comment. But certain of them are very large, such as elimination of grade crossings, paving between tracks, burying of wires, extensive ornamental lighting systems, elimination of smoke, fumes, and odors. These are all unprofitable, in the view of the corporation's system of accounting, in that they do not lead to an increase of earn-

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Fruit Company. Through a series of years, from 1901 to 1914, the company has averaged over 10.7 per cent on its capital invested in its regular business, but only 4.3 per cent on the funds in its insurance reserve.

[11] The United Fruit Company carries a large proportion of its fire insurance fund in "high-grade first mortgage railroad bonds."

ings.[12] Such large expenditures are more or less certain in all industries and frequent and burdensome in some. The cost of paving streets between the tracks is imposed, sooner or later, upon all urban traction companies. The elimination of grade crossings and the providing of unecessarily elaborate urban terminals are demanded by the public of every town of importance in the United States.[13]

As the outlay for this class of improvements—like elimination of grade crossings and burying wires—is very large, it is unfair to charge the costs to the expenses of operation of the single year in which expenditures are made. The necessity for such improvements has probably been growing as the community grew, and their advantage will extend far beyond the single year.[14] Furthermore, it is improper to defray their cost by increasing the admitted plant assets of the corporation, because the plant is worth no more, for the purpose of making a profit, after the improvements are made than it was before.

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[12] It should be noted that the word "unproductive" is used in its business sense of not being immediately productive of any increase of earning power. Many improvements are unproductive from the accounting sense of not leading directly to an increase of profits, which are tremendously productive in the social sense. Thus the elimination of grade crossings is not directly productive to the railroad, but it is unquestionably productive to the community and human society as a whole.

[13] Many other such unremunerative improvements are found to be necessary among public service companies. The burying of their wires is required of telephone companies in urban districts; electric light companies are constantly confronted with expenditures required by the public—ornamental street lighting has recently become an issue in many cities. Removal of wires from main streets is another public demand.

Nor are such expenditures confined to public service companies. Manufacturing companies are required to employ expensive devices for consuming their wastes, and even banks and retail merchants are called upon to make heavy and extraordinary contributions to social needs all out of proportion to any corresponding increase in their profits. Thus the Bank of Montreal contributed freely to certain charitable purposes during the early part of the Great War, and retail storekeepers are always contributors to community welfare movements. In a sense these contributions are advertisements, but the broader and truer interpretation is that they are a part of the cost of communal and social welfare which all alike must bear. They are in truth social taxes.

[14] In the preliminary annual report of the Dayton Power and Light Company for the year ending December 31, 1913, the year of the Dayton flood, occurs the following quotation: "When the 'flood prevention fund' was agitated in Dayton, our Company (together with The National Cash Register Company) was the first to contribute, and our subscription of $50,000 to this fund made a profound impression on the community at large and greatly stimulated the interest that finally resulted in raising a total fund of $2,159,744 for flood prevention." As this flood prevention was a permanent improvement, but one which did not directly increase the earnings of the electric light company, it should have been paid out of a reserve accumulated out of annual appropriations for the purpose of caring for such socially necessary, but unremunerative, improvements.

Thus it may cost a railroad $500,000 to eliminate a grade crossing in a populous suburb of a large city. Clearly the need for the change has been increasing as the suburb grew and its advantage will be felt for years to come, yet the railroad will collect no more fares after the grade crossing is gone, nor will its cost of operation be appreciably less; its property is no more valuable, as a railroad, than it was before the money was spent. It would be misrepresentation[15] to mark up the capital value of the railroad by the cost of the improvement. The only logical method of treating such expenditures is that of creating a reserve fund for them through annual appropriations from the general surplus.[16]

The obvious difficulty in making these appropriations is the evident uncertainty of the cost and frequency of such unprofitable improvements. This difficulty is unquestionably real, but it can hardly be advanced against the wisdom of the policy. The fact that the amounts to be appropriated from the general surplus to create a fund to meet an uncertain future expense are themselves uncertain and difficult to estimate, is no basis for the presumption that such a fund need not be created. In truth the very uncertainty of the demands to be met by the fund is the chief cause for its existence. In reality the uncertainty of such improvements as we are here discussing is far less disconcerting than the indefinite terms by which they must be described. A railroad operating in a thickly settled locality must realize fully that the various communities which it traverses will require, sooner or later, the elimination of one grade crossing after another. Particular costs at particular times may remain indeterminate, but the all-important fact that the improvements must be made is certain. And some working hypothesis can be developed by the engineering department, relying on the law of averages. For example, in this matter of the elimination of grade crossings by railroads, it is possible for the chief engineer to work out a kind of "experience" of his road, by which he may make a plausible guess as to the point, in increasing population and traffic, at which the community will demand the change from a grade to a submerged or overhead crossing. The organized and classified experience of an individual road in this particular may be compared with that of other roads operating under analogous conditions. With these guesses before him the chief engineer will be able to estimate the amount that the road must probably expend during the succeeding ten, fifteen, or twenty years on this single item. It is then a comparatively simple matter to distribute the total amount evenly over the period.

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[15] In spite of the practice tolerated by many English accountants who fail to analyze the purposes behind their capital expenditures.

[16] This idea is admirably expressed by an engineer referring especially to traction companies. "Every company occupying public ways is confronted with the certainty that they will be compelled to make costly changes of plant owing to changes made in state or municipal regulations. It is proper that a company should make annual appropriations to provide funds to meet obligations arising from such causes." Jackson, W. B., "The Depreciation Problem," 37 An. Am. Ac. Soc. Pol. Sci. 41 (Jan. 1911). Unfortunately what Mr. Jackson regarded as "proper" was not done by traction companies, except in very few cases.

The question naturally arises as to whether some of the cost of the unprofitable improvements may not wisely be written off during a term of years following the completion of the enterprise. If such a policy be followed it will be necessary to carry forward a part of the cost as a deferred asset, to be gradually extinguished during the term. Such a policy may have the advantage of being more certain and definite in its demands than that of creating a reserve fund, but it has the glaring defect of throwing the entire expense into a relatively short period or prolonging indefinitely the deferred asset. Moreover, since the cost cannot be transferred onto the shoulders of the community by an increase of rates, it is probable that the period following the improvement is no better able to bear the expense than the preceding period. Were it possible to increase the rates for service or otherwise increase the earning power of the corporation by reason of the improvement—as water companies sometimes do on the erection of a filtering plant—the improvement would not be unprofitable and hence would be outside the present category.

The last, and in a sense the vaguest, group of special reserves that should be set aside from the general surplus, is that to care for abrupt changes in the demand for the product. Such reserves are especially necessary when it is obvious to the management that an unusually large surplus of net earnings has arisen because of an abnormal demand for the product or abnormally favorable conditions under which to purchase raw material. The character of the situation is indeed too vague and uncertain to permit of establishing invariable principles or even convenient rules of practice. It is certain, however, that when large earnings have resulted from abnormal conditions which are of a relatively temporary character and over which the management can maintain no control, some reserve must be set aside to fortify the corporation against losses when conditions become unusually unfavorable.[17]

Difficult as it is to determine any average reserve that must be set aside in abnormally prosperous years, it is even more difficult to determine under what conditions such a reserve should be utilized. Clearly the purpose of setting aside the reserve in the prosperous years is to afford a fund to equalize the excessive production costs or even the deficits during years of abnormally bad earnings.[18] But what shall be the criterion

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[17] The fluctuating earnings of the railway equipment companies have been cited elsewhere as illustrative of abrupt fluctuations, and the illustration will be used as an extreme instance of yearly fluctuations in earnings in the following chapter, but at this point it is important to note the abrupt change from the year ending June, 1907, one of the "boom" years of recent industrial history, to that of 1908, a year of depression. For further and extended discussion of this question see Volume II, Chapter IV, and Volume IV, Chapter III. Note particularly the abrupt fluctuations of earnings of the American Locomotive Company, page 94; and the table given in note 25, Chapter VI.

[18] Special unforeseen catastrophes should be regarded in the light of years of abnormally bad earnings. And there should be this reserve to care for both the direct and indirect expenses and appropriations required. For example, the Dayton Light and Power Company, referring to the disastrous flood of March, 1913, states that, to the admitted earnings "should be added the net business lost after the flood because the power plants were 'down' and our consumers could not use the

bad year is so bad as
this reserve to offset its
No invariable rule
the decision in any
of general financial
the credit of the
policy.

reserve can accomplish
the directors and the
acknowledgment of the
are almost invariably
The admission of
act as a deterrent to
payments of excessive
tures for new construc-

of every industry—
losses, unknown large un-
own fluctuations of busi-
which, though indeter-
be provided for. The
them in years of abun-
special reserves deducted
surplus of the year can
safety.

side there remains a sur-

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after the flood. Also the increase
all of which must be added
compare with the year 1912 . . .
charged this off for the current
under the circumstances, but it
an extent as to give a wrong
Had there existed a "Reserve
preceding years, a large part of
to it.

ently explains the existence of
observed by certain corporations.
required by the provisions of its
$40,000 a year. Half of this fund
placed in the permanent improve-

plus that the directors may, conservatively, distribute in dividends or reinvest in new property for the general benefit of the corporation. A middle course is usually followed, part being allotted to dividends and part to reinvestment. The principles that must guide this decision are discussed in the succeeding chapter.

CHAPTER VI

THE PRINCIPLES GOVERNING THE DISTRIBUTION OF PROFITS TO STOCKHOLDERS

The distribution of surplus to the stockholders a matter of policy, 72; Considerations determining dividend policy, 76; Reinvestment of surplus in the business, 77; Confidence in accounting methods, 80; Regularity in dividend payments, 82; Importance of dividend regularity, 84; Dividend regularity involves the prediction of earnings, 86; Extra dividend, 97; Bond and scrip dividends, 98; Stock dividends, 101; Property dividends, 111; Taxation of stock dividends, 112.

That which remains of net profits after all interest charges have been met and all special reserves set aside may be used by the stockholders as their directors see fit.[1] It may be called the "stockholders' surplus." The directors must, however, determine what proportion of this surplus should be paid over to the stockholders. Many and varied considerations tend to influence the directors in determining the proportion of the total net surplus that may expediently be distributed among the stockholders and the proportion that should be kept in the business. This question is in the end not one of the theory of accounts or of business law or even of universally applicable financial principles. It is purely one of individual business expediency.

Underlying this principle of business expediency, as an inflexible rule, is the clearly established principle of law and finance that dividends may not be declared out of capital. The law, apparently, interprets capital somewhat roughly and does not rigidly insist that proper depreciation charges shall be set aside before computing net profit.[2] But it has made it clear that there cannot be a direct payment of dividends in excess of what we have here called gross profit.[3] Further than this there is absolutely no statutory or other principle of law that determines or even concerns itself with the proportion of the gross or net earnings that may be paid to the stockholders of a corporation.

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[1] Strictly this is true, although there may exist provisions in mortgages or bond indentures requiring that some of the net profits remaining to the stockholders be temporarily segregated and used as special reserves. Sinking funds are of this nature. (See Chapter VIII.) But it should be observed that the property represented by such reserves belongs to the stockholders and will come, ultimately, under their complete control.

There is no other principle of law, one ought to add, except the principle of law and common morality that the declaration of dividends should not be based on misrepresentation. This would be understood without saying had it not been for several notorious instances in which the managers and directors misguided the stockholders. The most obvious kind of misrepresentation, like that cited already[4] in the case of the American Malting Company, is the overstatement of earnings in order to present an accounting justification for the payment of unearned dividends. The real justification is some ulterior motive, such as a vindication of a bad management,[5] the maintenance of the market price of a company's stocks,[6] the maintenance of the legality of the company's bonds among savings banks,[7] or the sale of bonds at a higher price than actual earnings would justify.[8]

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[2] The most serious difficulty, from the legal point of view, of defining with inflexible rigor the meaning of net profits has arisen in those cases in which the courts are called upon to adjudicate the payment of contingent interest charges on income bonds.

[3] The important case of the American Malting Company has been cited a number of times.

[4] Previous note. Also Volume I, Chapter VI, note 44.

[5] In 1872, General Daniel E. Sickles, backed by English stockholders, turned Jay Gould out of the management of the old Erie Railway. He began immediately to pay dividends on the preferred stock and soon on the common as well. In 1875 a committee of English bondholders found that the earnings for the previous three years had been represented to be \$5,352,673, whereas they were in truth only \$1,008,775. For details see Daggett, S., Railroad Reorganization, 37 (1908); 2 Hepburn Com. Rep. Exhibits, 623.

[6] This is the usual excuse for an unwarranted dividend action. Sometimes the price maintenance is to assist an inner clique to sell their stock (the American Malting Company case cited in note 3) and sometimes to reassure many small investors of the company's continued prosperity. This was the excuse alleged many times to justify the New York, New Haven and Hartford Railroad's directors in paying unearned dividends. (Chapter IV, note 11.)

In the past many railroads have been guilty of such deceit, and one of the clearly apparent advantages of a uniform system of railroad accounting has been to make this particular species of misrepresentation more obvious and more certain of discovery. But another kind of misrepresentation, sometimes indulged in, is that of withholding by the directors of

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[7] The New England railroads, particularly the Boston and Maine, paid dividends long after ordinary business judgment required that all dividends be suspended, very largely because a suspension of dividends would debar further issues of the company's bonds from Massachusetts savings banks. The following summary shows clearly this ill-fated policy in the case of the Boston and Maine Railroad:

YEAR ENDING JUNE 30

	1909	1910	1911	1912	1913	1914
Total Revenue	$39,528,698	$43,357,175	$44,815,084	$45,990,364	$48,513,507	$47,413,906
Net Earnings from Operation	10,177,224	10,732,983	8,506,216	9,832,994	9,930,596	8,760,460
Fixed Charges.	7,789,622	7,882,362	8,150,228	8,542,746	9,880,899	10,805,202
Net, after Charges ...	2,387,602	2,850,621	355,988	1,290,246	49,697	*2,044,742**
Dividends, Preferred	188,988	188,988	188,988	188,988	188,988	....
Dividends, Common ...	1,628,373	1,679,532	1,769,983	1,578,963	1,185,150	....
Betterments ..	41,099	198,842	....	....	....	....
Balance	529,143	783,260	*1,602,983**	*477,704**	*1,324,441**	....

*Deficit.

For previous improvident dividend policy see Chapter V, note 1. From the above it will be observed that the Boston and Maine Railroad continued to pay unearned dividends for three consecutive years. Later results, see Volume IV, Chapter IV, note 29.

[8] The Chicago, Milwaukee and St. Paul Railway built a Pacific Coast extension, known as the Chicago, Milwaukee and Puget Sound Railway, at a cost of approximately $150,000,000. The money was furnished by the parent road, the latter taking certain stock and upwards of $100,000,000 in Chicago, Milwaukee and Puget Sound Railway First Mortgage 4's, 1949, in return for the construction money advanced. These bonds remained in the St. Paul's treasury from 1909 to 1911, when it was decided to market them. To do this the earnings of both the parent and its subsidiary were fictitiously increased during the preceding year so as to make the credit of the parent and earning capacity of the subsidiary appear to be more substantial than they really were. Of this episode Ripley reports, summarizing the results of the Interstate Commerce Commission's investigation: "Desiring to create a favorable market for the sale of securities in France, all interest, rents, and revenues for the three years of construction work were included in the income account for 1910 alone. At the same time operating expenses were reduced by crediting items, such as salvage from cars destroyed, as far back as 1907. By this means the income of the St. Paul was overstated in the given year by more than five million dollars. . . . Notwithstanding the gravity of these offenses, the delinquencies in the accounting of the Puget Sound company were even more significant. Most of the classical expedients for overstating income were resorted to. . . . Construction material was actually charged higher rates than those provided for in the published tariffs. Interest items were manipulated, and no charges whatever for depreciation of equipment were made. Had the established accounting practice been adhered to, the reported income of $2,255,000 would have been practically eliminated, and the dividend of 2 per cent paid to the parent company out of 'income' would really have come from capital." Ripley, W. Z., Railroads, Finance and Organization, 23 (1915). For an exhaustive and illuminating discussion of this notorious episode see 29 I. C. C. Rep. 508.

information concerning dividend action. The most notorious case of this kind is that of the action of the Union Pacific Railroad's directors in August, 1906. By reason of large hidden earnings of the Union Pacific's subsidiary, the Southern Pacific, the latter came, in the summer of 1906, into a position to pay dividends into the treasury of the Union Pacific. Accordingly the directors of the two roads met simultaneously. The Southern Pacific directors declared an initial dividend of 2½ per cent and immediately thereafter the Union Pacific Railroad's directors raised its semiannual dividend from 3 to 5 per cent. But this action was rigidly concealed for two days. Meanwhile tremendous activity occurred in the market for the company's shares. More recently the directors of the B. F. Goodrich Company concealed a dividend action on the preferred shares for a period of six weeks. During this period the stock fell from $89 a share to under $74 a share, and the decline was accompanied by heavy selling.[9]

These instances are, fortunately, sporadic and called forth the condemnation they deserved. In every direction there is a growing demand that extreme care be exercised that all representations concerning earnings and dividends made by a corporation s directors to its stockholders, shall be not merely technically true but implicitly and unequivocally true.

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[9] For example, the *New York Evening Post* has the following straightforward comment (issue of December 6, 1913):

"On Wednesday of this week, in the formal announcement to preferred shareholders of the B. F. Goodrich Company that the regular dividend of 1¾ per cent had been declared on their stock, the statement was made that this dividend was declared six weeks ago, on October 22. Harmless as the statement appeared to be, it brought such serious criticism against directors of the B. F. Goodrich Company that the extreme means of punishment was suggested of removing the Goodrich shares from the Stock Exchange list.

"For, by withholding formal announcement of their dividend action until this week, directors of the Goodrich Company permitted the preferred shares to fall in price from 89 to 73⅜, investors in the company and Wall Street speculators selling the stock through the month of November on rumors that the dividend was to be cut or passed.

"The fact that no way has been found for punishing those guilty of the Goodrich episode has not lessened the indignation that is felt at the entire episode; rather it has led to a general demand on the Stock Exchange for a rule that will in future make it compulsory for all dividend announcements to be made within forty-eight hours after they are declared. Another need it has emphasized is that of more and better laws governing the management of corporations. The Goodrich incident has uncovered an old condition wherein certain directors admit they knew nothing of what other directors were doing. The Goodrich dividend was declared on October 22, at Akron, Ohio, by a quorum of the board. Not until this week did certain of the other directors know the dividend had been declared. Here is a condition disclosed which clearly needs remedying."

The dividend disbursement is essentially a problem of business expediency and can be treated only in this light. Many circumstances tend to affect this expediency, but when they are all gathered together it is seen that certain questions are of great importance. The first and foremost is the proper balance between the dividend disbursements on the one hand and the amount of yearly earnings that should be set aside and reinvested in the business on the other. In other words, the fundamental question of dividend policy is that of the proportions of annual earnings that shall be distributed and that shall be retained. Secondary to this question is that of the manner in which the dividends shall be paid.

If the accounting methods of a corporation were perfect, and liberal reserves for all contingencies set aside in accordance with the principles described in the preceding chapters, the only reason that would lead to the retention of any earnings in the business would be the belief that the money would earn more for the stockholders in the business than if it were distributed among them. But the accounting methods are not perfect, and quite generally corporations do not set aside specific reserves analogous to those heretofore described, especially those for the less obvious uncertainties of the business. Furthermore, there is always the possibility of contingencies which may render insecure the foundations upon which the computation of earnings rested—such as a sudden decrease in the value of inventories carried over from the previous year, a flood, or even the organized destruction of property by revolutionary uprisings.

Actually, therefore, the question of the apportionment between the stockholders' surplus retained in the business and that distributed, rests on these practical considerations: first, the amount that the directors feel justified in reinvesting in the business; second, the confidence they have in the accounting methods by which the net earnings are computed and in the sufficiency of the special reserves set aside before estimating the net stockholders' surplus; and lastly, the strength of the feeling that a dividend rate once commenced should be adhered to, a policy which necessitates that reserves should be set aside in good years to be used to make up the dividend deficits of bad years. In practice, unfortunately, corporation officials do not separate the three motives, preferring to follow a kind of crude "horse sense," or a simple rule-of-thumb, such as a dollar for dividends to a dollar "put back." However, in order to bring out the fundamental principles involved it will be convenient to separate the three factors just enumerated.

The proportion of money that the directors deem it wise to retain in the business depends on the nature of the business and the relative ease with which money for contemplated improvements may be secured from outside sources.[10] The former is a question of the relative volume of money required in order to carry on the business and the latter is a question of the conditions of the money market.

A noteworthy and, from the economic point of view, a very significant difference between various kinds of business lies in the rapidity with which the capital is turned over. There are three points of view from which this phenomenon may be analyzed. One is the length of credit required to safeguard invested capital, another is the sensitivity to changes in industrial conditions, and a third is the relative quantity of fixed capital necessary to meet the requirements of an increasing volume of business. This last is of moment in this question of dividend policy. A remarkable contrast between the great industrial combinations and the combinations in the railroad and public service fields lies in the fact that a large proportion of the former have issued no new securities since they were promoted. Indeed, instead of seeking new capital for improvements and extension they have, in very many cases, gradually absorbed the excess of capitalization that characterized their promotions through the steady, almost unnoticed, reinvestment of earnings in improvements to their plants. Each has been, for its capital requirements, sufficient unto itself. The expansion of the large railroad systems and public service enterprises presents a striking contrast. As their gross business has increased, plants have expanded many fold. A slight increase in their gross income requires a vastly greater increase in their investment in permanent property. And this increase in fixed capital is all out of proportion to the net earnings likely to arise immediately from the enlarged property and the increased business.[11] This difference in the ratio between invested capital and the volume of business should have a marked effect on the dividend policy. If, as with established industrials, little new capital is required for an expanding business, a large proportion of the stockholders' surplus may be distributed as dividends. But if, on the other hand, considerable amounts of new capital are required for the ordinary course of the business, a small proportion of the stockholders' surplus should be distributed and a large proportion reinvested in the business.

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[10] These two considerations are subsidiary to the deeper question of business policy as to whether or not more money may be wisely invested in the business. The general problem of business expansion is treated in the succeeding volume.

The other consideration that may affect the judgment of directors in regard to the amount of the stockholders' surplus that should be put back into the corporation is the ease with which outside capital will be furnished for improvements. This is a matter of great seriousness at times. During the late summer and early autumn of 1914 when the hostilities of the European nations were the predominating element in all problems of finance, when the exchanges all over the world were closed and when money in large sums could not be obtained by private corporations at any reasonable price, many companies with insufficient money in their treasuries to meet their usual requirements passed their dividends in order to maintain a kind of reserve in case their plans for new construction should be interfered with by the stringency of the money market. This policy was adopted by many public service corporations which had undertaken large extensions of plant without the full amount of capital in hand. Such a policy was unquestionably wise in view of the disturbed conditions of the world's markets, but might be criticized by the stockholders who could easily persuade themselves that the war would be of short duration and that, therefore, the stockholders could claim the full payment of dividends as a matter both of right and expediency.

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[11] There is a marked difference between what are approximately the extremes of the series—the shoe manufacturing business and the hydro-electric power business. In the former case the machinery is leased from the United Shoe Machinery Company—thus involving no capital investment. Even the building or "shell" may be rented. As a result the shoe manufacturer may plan to turn his capital at least once in two months—six times a year. In case a considerable proportion of the capital required in the business is furnished by banks and merchandise creditors, the rate of turnover of the proprietor's own capital may be even greater. A large hydro-electric power dam, costing $10,000,000, is likely to earn about $1,000,000 gross a year—often even less. It "turns" its capital once in ten years. The ratio of rapidity of turning capital in these two industries is thus at least 60 to 1.

It should be noted in passing that the more serious question of the general expediency of putting more money into the business—a question which underlies all others in the matter of the reinvestment of the stockholders' surplus—is not touched upon here. That is the question of business expansion, to a discussion of which Volume IV of this study is entirely devoted. Here it is merely observed that the two considerations just mentioned—the rapidity with which the capital is turned and the condition of the money market—may influence the minds of directors in determining their dividend policy, irrespective of their general policy regarding the expansion of their business.

The second determining factor of dividend policy, that of lack of confidence in the accounting methods of the corporation, is always in the background of the minds of corporation directors. As suggested several times before, accounting methods are efforts to state precisely—or rather with that degree of precision figures make possible—a set of varying, and in many cases intangible, economic values. So long as these estimates serve only as checks to actual conditions, errors in them are not vital. But should they mislead the judgment in distributing as net profit what was, in truth, capital, the consequences to the solvency of the corporation would be serious. To prevent such an overestimation of earnings it was insisted in the preceding chapter that reserves for various unknown contingencies should be set aside. But the vast majority of corporation officials will not insist on any such sophisticated precision regarding reserves for unknown events. They will prefer merely to keep some of the earnings in the business, so that if "something comes up" the corporation shall have a bulwark to fall back upon. Or, putting the matter more baldly, most corporation officials will not insist that special "earmarked" reserves be set aside for various unknown possible losses; but they will insist that they be given the unrestricted power to determine the amount of earnings to be kept within their control as a general reserve fund to meet the future vicissitudes of trade and public demands—vicissitudes which they only vaguely, but nevertheless consciously, recognize.

Furthermore, in addition to any possible losses which accountant and director alike might anticipate, it frequently happens that there are contingent events which no system of accounting, unless omniscient, could protect the corporation against. In the year ending December 31, 1913, the express companies were putting into effect the new and radically lower system of rates established by the Interstate Commerce Commission. No one could tell whether the cheaper rates would so affect the use of the express service that the receipts under the new schedules would increase or decrease the net revenue. At first there was a distinct dropping off of earnings. In the case of the Wells Fargo Company, the total earnings during the year ending June 30, 1914, were clearly less than the previous dividend rate. The dividend was reduced from 10 to 6 per cent annually,[12] although the company's total earnings at the end of the year amounted to something over 9 per cent.

Again, even the most accurate computations of necessary reserves must be fortified by an additional margin, in those businesses of an extra hazardous character which rest on the maintenance of an ample reserve under all circumstances. An insurance company must maintain not only its legal reserve, as determined by experience tables, but in addition a kind of reserve of reserves which can be used whenever the losses of the company exceed those defined by the experience tables. This is particularly true in the case of fire and marine companies, because their unusual losses are more exaggerated than those of life companies. On this principle no insurance company should distribute dividends to stockholders until it has created a considerable surplus above its legal reserve.[13] Such a course will, in the end, be more profitable to the stockholders, since the added strength of a large surplus will enhance the company's credit and, on the reputation of conservative management, increase its volume of business.

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[12] The President of the company remarked in his report that the express companies were on trial, and that the safer policy to pursue was to reduce the dividends to well below the total earnings. The phrasing of this part of the report is worth considering. "Notwithstanding the net earnings from all sources for the year were nearly sufficient to pay the former rate of dividend, it was apparent that, for the time at least, the company's operations should be conservatively regarded as passing through a probationary period; and until the earning possibilities under the new conditions could be more fully demonstrated, the Board of Directors decided to reduce the dividend rate, which was fixed for the last half of the year at 3 per cent." Report, dated October 8, 1914.

[13] As stated above, this principle is more important for fire, accident, and marine than for life companies because of the inadequacy of experience tables and the difficulties to be overcome in scientific rating. Furthermore, the principle is more important in small than in large companies because of their difficulty in getting wide geographical distribution of risks.

The principle is itself a confession of the abiding uncertainties which undermine our confidence in the sufficiency of legal reserves. Insurance as a business is based on the application of the law of averages to risks, so that the risk of the business itself lies in the fallibility of the law of averages.

Yet when all is said, the whole question of the proportion of profits to be retained in the business must rest with the judgment of the directors themselves. In the end, it is true, the "horse sense" of the average corporation director will prescribe a reserve to be "left in the business" which will approximate—and quite often exceed—the sum of the various reserves which the accountant would insist upon from his elaborate sophisticated guesses. It does not matter to the well-being of the corporation whether the proportion of earnings retained in the business to safeguard it against the vicissitudes of an unknown future is computed by the laborious and intricate calculations of the engineer and the accountant, guided by a "law" of averages, or is merely guessed at by shrewd men on the basis of a long and varied experience of business, provided only the amount held back be ample. And it is distinctly to the credit of the majority of American business men who reach high managerial positions, that their natural insight enriched by a wide experience is sufficient to protect the stockholders against their own avarice in demanding larger dividends than prudence justifies.

Far subtler is the third consideration determining the proportions of earnings retained and paid out—the requirement that dividends shall be constant and regular. It is subtler because it depends on the interpretation of business policy by large groups of stockholders and by the general public, who, by their approval or disapproval, can make or mar the general credit of the corporation.

Underlying all other considerations in the general question of dividend regularity, is the fact that the net earnings of a business corporation are never regular. Some are more regular than others, but it is inherent in the nature of business enterprise that the net results of no two years shall be exactly alike. A regularity in dividend payments must therefore be superimposed on an irregularity of earnings.

The general subject of business fluctuations has been discussed to some extent in Volume II, dealing with the financial plan of various types of business. At that point great care was taken to indicate the extreme differences of policy underlying the financial plans of different types of corporations, because of the varying degrees of accuracy with which earnings could be predicted. This same question of the accuracy of predictions of earnings underlies all considerations of the regularity of dividends. At one extreme is a private water company, the earnings of which may probably be predicted within a very close margin of error. At the opposite extreme is a manufacturing concern making some specialty machinery, where earnings are subject to abrupt, violent, and unpredictable fluctuations. The specific solution of the problem, then, is inherent in the character of a business. For that reason it can be discussed only with reference to specific businesses, and this is the task of the succeeding chapter. But the general question as to the expediency of making regular dividends is one which applies to all corporations.

Certain assumptions are essential to the proper relations between the directors and the stockholders of each and every corporation. There must be no direct or constructive deception in regard to the "regularity" of dividends. The directors must not give the stockholders good cause for assuming that a policy of regular dividends is to be followed, and then break the understanding at the first excuse.[14]

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[14] An example of such a foolish, if not deceitful, policy is offered by the history of the dividend policy of the directors of the United States Rubber Company toward the common shareholders. The company was organized in 1892 as one of the inflated promotions of Charles R. Flint. (Account of promotion, 13 Ind. Com. Rep. 33-50 [1901].) The common stock was not then, nor has it ever been, based on substantial value, and was held only as a speculation. The earnings of the company were very irregular and the early history was characterized by manipulation and

The regularity of dividend payments helps the corporation in two very important respects. It creates a loyal group of stockholders who hold their stock for investment and not for speculation. It also creates a strong credit to be utilized for borrowing in the open market. In the former respect the value of a record of regular dividends can hardly be overestimated. The common stocks of the Great Northern, the Pennsylvania, the Chicago and Northwestern, among railroads; the American Telephone and Telegraph, the Pullman, the United Gas Improvement among large public utility companies, enjoy a confidence from the conservative in-

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wide fluctuations of the market price of the company's securities. The first dividend was declared in 1897, when 2 per cent was paid, and as much again in 1899 and 1900. In 1901, nothing was paid on the common stock and the dividend on the preferred was reduced abruptly from 8 to 1 per cent. There had been a sudden falling off of earnings, and just prior to the time this fact was known there was every indication to point to extensive sale of the company's securities by certain of the directors. Nothing further was paid on the common stock until 1911, when 1 per cent was paid. At that time the company was borrowing extensively for working capital. It was announced at the time that the initial dividend was the beginning of a policy of regular quarterly dividends of 1 per cent. These dividends were regularly paid during 1912. In 1912, too, the directors declared a 20 per cent stock dividend on the common stock, and in 1913 placed the stock on a 6 per cent basis by initiating quarterly disbursements of 1½ per cent.

In the autumn of 1914, all rubber companies were feeling the bad effects of the dislocation in the world's business, and the majority of them reduced their dividends to protect their cash reserves. In the early spring of 1915, rumors based on "inside information" were in constant circulation and on the basis of the continued maintenance of its dividend and on the substantial prosperity of the company, the common stock rose to 74¼ in April, 1915.

In June there was great activity in the company's shares, and the price of common stock declined $30 a share on the rumor of a dividend reduction. This was emphatically denied by the "insiders." The president commenting on the continuation of the 6 per cent rate, said:

"The dividend earned, and the finances being in easy condition, with $8,000,000 cash on hand, I think the action of the board is not only conservative, but one that is entitled to commendation in these times of war and financial stress. The division of $1,700,000 at this time among the 15,000 stockholders of the company, will, I am satisfied, do much good, and be most thankfully received." (*Boston Post*, July 2, 1915.)

This announcement was made in the morning of July 2 and the Stock Exchange quotations of the common stock rose rapidly in consequence. In fact the recorded price was $5.50 a share above the low point.

In the afternoon of July 2, after the close of the stock exchange, the directors announced that they had not merely reduced the dividend but passed it altogether. Apparently the eleemosynary motives of the president did not prevail.

The following morning the price declined $8 a share on the first sale. It was an open secret in the financial districts that some of the directors had been selling the stock during the preceding days on the basis of their exclusive information. Editorials in all the better class of financial papers condemned the conduct of the directors from every point of view, and an investigation by a New York Stock Exchange committee was suggested. For a clear statement of the case and the issues involved see 6 Annalist 5 (July 5, 1915).

Obviously such a policy ruins the credit of the company among investors, and very materially, through lack of confidence in the integrity and honor of the directors, hurts the market for all the company's securities.

vesting class due primarily to the long record of regular dividends.[15]

Besides strengthening the investment position of the company's stocks, few facts help the sale of its bonds more than the statement that it has paid regular dividends of 4 or 5 or 6 per cent for the last ten or twenty or thirty years. A dividend record showing large disbursements during years of prosperity and "passed" dividends during the depressions, stamps the stock as speculative, [16] and investors tend to associate the stock and the bonds together in one category.[17] Few

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[15] The following tables give, in summary form, the remarkable dividend history of some of the older investment corporations.

	Consecutive Years of Dividends to January 1, 1919	Average Rate for Entire Period	Average Market Price for Stock for Five Years from 191 to 1916 (per share)	Average Income from Cash Dividends During this Five-Year Period
Railroads				
Pennsylvania Railroad	63	6.2%	$57.51	5.41%
Illinois Central Railroad	56	7.0	102.39	5.66
Chicago and Northwestern Railroad	41	6.4	131.66	5.31
Delaware, Lackawanna and Western Railroad	39	12.9	227.00	4.40
Delaware and Hudson Company	38	7.2	154.88	5.81
Great Northern Railway (Preferred)	38	6.5	124.81	5.61
Chicago, Burlington and Quincy Railroad	38	7.3	no reliable market	
Other Public Utilities				
Pullman Company	45	8.7	161.45	4.95
American Express Company	37	7.4	134.68	6.00
Consolidated Gas Company (N. Y.)	34	6.2	133.62	4.75
United Gas Improvement Company	34	7.9	86.56	4.62
New England Telephone and Telegraph Company	33	5.4	139.93	5.00
Industrials				
Westinghouse Air Brake Company	44	31.0	139.50	6.67
Diamond Match Company	30	9.1	106.26	6.73
Swift and Company	30	8.2	125.94	11.05
American Sugar Refining Company (Common)	28	8.9	112.05	6.33

[16] For illustration, contrast the dividend record of an "investment" stock, such as those records summarized in the preceding note, with a highly speculative stock—even a preferred stock—such as that of the United States Cast Iron Pipe Company. The following is its preferred stock dividend record: 1899 company organized; 1899, 1¾%; 1900, 3½%; 1901, 0; 1902, 4%; 1903, 4%; 1904, 4½%; 1905, 8%; 1906, 7%: 1907, 7%; 1908, 3½%; 1909, 5¼%; 1910, 4¾%; 1911, 2½%; 1912, 2%; 1913, 4%: 1914, 2%; 1915, 0; 1916, 2%; 1917, 5¼%; 1918, 5%.

[17] For example, in the case of the United States Rubber Company discussed in note 14. During the year 1914, the net earnings were reported to be over $12,000,000. The primary security was the collateral trust 6 per cent bond, due in 1918. At first glance this appeared to be an industrial bond of unquestioned security, with interest charges earned ten times over. Yet it sold continuously on a 5½ to 6 per cent basis, a much higher yield than other quick-maturing industrial bonds of equal apparent security. The 8 per cent dividends on the first preferred stock were

instances show this more clearly than the case of the American Can Company, the stocks of which had deservedly acquired the reputation of being a mere gamble. When the bankers sought to sell an issue of bonds of the company to the investing public, they found themselves confronted by the evil reputation of the company. Its abrupt fluctuations in earnings, reflecting themselves in an uneven dividend rate, coupled with certain notorious stock market manipulations,[18] had so impressed themselves on the public that no careful investor cared to associate his money with the enterprise, no matter how great the apparent security of the bonds.

Granting, then, the expediency of paying regular dividends rather than varying the disbursements according to the fluctuations in net earnings, the question arises how this may be best accomplished in practice. A detailed discussion of the practical questions involved is left for the succeeding chapter, but, in principle, it is clear that reserves, or undistributed profits, must be set aside in good years to be drawn upon in poor years. The acceptance of the general policy that dividend disbursements should be regular requires that the directors determine upon a regular rate, so far below the average net earnings that the undistributed profits shall be added to more frequently than drawn from.

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earned nearly twice over, and the stock sold so as to yield the investor from 7¼ to 7⅞ per cent. In contrast, the United States Steel Corporation earned its bond interest hardly twice over, yet the corresponding premier security was selling to yield the investor less than 5 per cent. The corporation failed by nearly $2,000,000 to earn the dividend on the preferred stock, yet the stock sold throughout the year so as to yield the investor from 6⅛ to 6⅝ per cent. The primary reason for this anomaly was that the management of the United States Steel Corporation had the reputation of being open and straightforward with its stockholders. (See note 14 of present chapter.)

The unsuccessful sale of the American Can Company's debenture bonds in 1913, (Chapter II, note 6) and the unfortunate results of the United States Rubber Company's bond syndicate of 1916, attest, with unmistakable clearness that a corporation with an evil reputation among investors cannot sell its bonds successfully, notwithstanding their apparent security. This has been referred to several times before. It cannot be repeated too often as it is one of the unmistakable principles of corporate financial policy.

[18] The manipulation of the depreciation reserve was described in Chapter II, note 6.

Once the dividend has been fixed and designated as a "regular" dividend, care should be taken that it be fully maintained under all ordinary circumstances. For this reason the management should use care that a proportion of the bookkeeping surplus set aside during years of liberal net profit should be invested in quick assets easily converted into money for the payment of dividends during years of depression. The American Shipbuilding Company failed to observe this cardinal principle, and felt compelled to pass its preferred dividend the first year of depression in spite of the fact that there had been accumulated a bookkeeping surplus almost equal to the par value of the preferred stock. It had been entirely sunk in long-term—many of them unproductive—improvements and lost to the stockholders. The directors faced this unpleasant fact and courageously effaced from their books over $3,500,000 of bookkeeping surplus—over half the apparent surplus.[19]

From such concrete illustrations, or from the mere statement of the principle that regularity of dividends should be maintained on the basis of an average of net earnings, it is apparent that the most difficult specific problem is the prediction of earnings. This is quite as difficult for an old-established

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[19] The American Shipbuilding Company, organized in 1899, paid its dividend regularly on the $7,900,000 of its 7 per cent preferred stock from its incorporation to the spring of 1914, and meanwhile accumulated a bookkeeping surplus of $6,561,367. The dividend of April, 1914, was passed, notwithstanding the large apparent surplus. The following table shows the remarkable fluctuations in earning capacity (fiscal year ending June 30):

	1912	1913	1914	1915
Net Earnings	$802,528	$849,874	$712,062	$175,770
Depreciation and Maintenance Reserve	221,828	243,400	432,757	170,365
Preferred Stock Dividends	(7%)553,000	(7%)553,000	(3½%)276,500	....
Common Stock Dividends	....	....	....	....
Surplus, after Adjustments	6,507,892	6,561,367	5,441,235	2,971,234

	1916	1917	1918
Net Earnings	$1,267,585	$4,501,956	$9,191,386
Depreciation and Maintenance Reserve	688,278	1,353,916	2,565,120
Preferred Stock Dividends	(3½%)276,500	(10½%)829,500	(7%) 553,000
Common Stock Dividends	....	(7%) 532,000	(16¾%)1,273,000
Surplus, after Adjustments	3,361,024	5,147,564	9,947,829

business as for a comparatively new business. Investors in old-established New England public utilities have realized this during the last decade. At several points the problem has been approached from varying angles, and its importance cannot fail to be fully realized. In the preceding volume of this book, dealing specifically with new enterprises, various principles were suggested that enabled promoter, banker, and investor to make intelligent guesses concerning the future earnings of new enterprises. But in the case of old-established companies, having their own experience to guide them, there are ample data available to make the dividend policy of a corporation, based on future earnings, something more than a mere intelligent guess.[20]

Common presumptions and "street proverbs" regarding the regularity or irregularity of corporate earnings cannot always withstand critical analysis. It has always been assumed, for example, that public utility earnings are more regular than the earnings of industrial enterprises. This is undoubtedly true under ordinary circumstances, but it is also undoubtedly true that the earnings, both gross and net, of many utilities underwent more abrupt fluctuations during the Great War than the earnings of many industrials. The latter could raise their selling prices as their costs advanced, whereas the utilities, dependent on the slow routine of public commissions, found themselves ground between fixed rates and rising costs. For many years it was assumed that the earnings of our western railroads fluctuated directly with the agricultural prosperity of the regions they served. During the period of railroad building—even down to the panic of 1893—this was true, but increasing diversity of traffic and increasing density of population has made these "granger" roads more dependent on general economic conditions than on the yield of a single crop or even group of crops.[21]

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[20] Discussions of prediction of earning capacity of promotion projects are to be found in Volume II, as follows:

Earning capacity of various types of manufacturing businesses, pages 49 to 60.

Earning capacity local public utilities, pages 64 to 75. Observe also note 19, Chapter V, of this volume.

Further extended discussion of the relation of earnings of industrial plants, before and after consolidation, will be found in Volume IV, Chapter III, particularly note 13 and the surrounding text.

Note also the discussion of the effect of depressions on different types of businesses in the next succeeding pages.

To stabilize the dividend payments of a corporation the directors must distinguish between two types of business, the type with more or less uniform earnings and the type with abruptly fluctuating earnings. In general it will be observed that the business supplying a commodity which is sold directly to and immediately used by the ultimate consumer, has a more stable earning capacity than a business which produces goods to be used by other businesses in the production of something else. For example, a business which produces matches and sells them to the public is of the first type. Its goods are sold

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[21] An attempt was made by L. B. Anderson in a graduation thesis submitted in 1916 to the Harvard Graduate School of Business Administration to prove, statistically, the long-acknowledged presumption that the earnings of the Atchison, Topeka and Santa Fé Railroad were directly dependent on the Kansas grain crops, particularly wheat. Instead of proving the contention one is forced to acknowledge that just the opposite conclusion must be drawn from the data available. This is obvious from a few figures.

Year	Crops of Kansas (Millions of Bushels) Year Ending December 31			Wheat Yield per Acre (Bus.)	Railway Earnings Year Ending the Succeeding June 30		
	Wheat	Corn	Oats		Percentage Agricultural Products to Total Tonnage (Gross Tons)	Freight Density (in Thousands)	Gross Earnings per Mile
1906	93.2	187.0	26.5	14.4	24	....	....
1907	74.0	145.2	14.1	10.2	24	....	....
1908	76.8	150.6	16.7	11.0	25	639	$9,624
1909	80.4	147.0	25.5	12.5	22	707	10,588
1910	61.0	152.8	53.9	12.5	24	675	10,393
1911	50.8	105.0	32.0	10.9	23	656	10,139
1912	88.8	156.4	42.2	14.2	21	726	10,874
1913	72.4	18.4	28.1	11.9	20	671	10,186
1914	180.9	87.3	45.3	20.0	26	743	11,893

That the conditions in the Kansas wheat industry have some influence on the earnings of the Atchison road is obvious from these figures. Yet to connect the total earnings of the road and its prosperity—as often has been alleged—with Kansas wheat is certainly a far-fetched deduction. These figures indicate, moreover, how relatively constant the earnings of a great railway system are now, even when the road is not conspicuous for the diversity of its traffic.

directly to the consuming public. They are immediately used up. No consumer acquires more than a limited supply of matches, and they are a negligible item in his total expenditures. The consumer does not, therefore, buy matches liberally in times of business activity when he "feels rich," nor does he curtail his purchases of matches during a business depression. The sales, therefore, of a match factory are independent of business depressions. True, like all manufacturing businesses, the earnings will fluctuate in accordance with variations in the skill of management and the ordinary hazards of any business enterprise. This is admitted. But if there is a relative uniformity in the skill of management, the gross sales of matches and the resulting net profit should be relatively constant.

The business of manufacturing locomotives, on the other hand, meets just the opposite conditions. A locomotive is not used up. It is not sold to the ultimate consumer, for the ultimate consumer is not the railroad, but the railroad's patron. The locomotive is merely, in itself, an instrument of production. Unless there is freight to be moved, it is valueless. Railroads will use their old locomotives during periods when there is reduced freight movement; they will rush into the market to purchase locomotives as soon as an industrial boom increases their volume of freight receipts beyond the wonted capacity. In consequence the manufacturer of locomotives will make few sales during the period of business depression and the earnings of his business will be small, no matter how much skill of management he may exercise. And, conversely, the sales of locomotives during periods of great business activity will be very large, and the earnings will be exorbitant, irrespective, almost, of the business skill of the manufacturer.[22]

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[22] The theory of economics distinguishes between the two kinds of commodities represented by these two types of businesses. The kind of commodity sold to and directly consumed by the ultimate consumer, like matches, is called "consumers' goods." Matches, writing paper, breakfast foods, beef, farm products, and the

This difference in the relative constancy and variability in the earnings of the two types of corporations is further intensified by differences in price of the commodities sold. The lower the cost, the more stable the earnings; the higher the cost, the greater the fluctuations in earnings. Although both matches and overcoats are sold directly to and immediately used by the ultimate consumer, the former will be bought in essentially the same amounts in good times and in bad times; a new overcoat will be bought in times of business prosperity more often than during periods of depression. When a man "feels poor" he will buy the same number of matches, but he will have his old overcoat freshened up for winter. And the same principle holds true for goods of the second type sold to other manufacturers. A railroad will hesitate much longer before purchasing a new locomotive than a new wrench for the repair shop. The former purchase will be made only if the prospective traffic warrants the expenditure, the latter will be made soon after the old wrench wears out, without much reference to general business conditions.

Again this principle is further modified by the relative importance of the commodities manufactured and sold. Notwithstanding matches and sealing wax are both low-cost commodities sold to and directly consumed by the ultimate consumer, they are not equally necessary; notwithstanding locomotives and automatic lathes are high-priced commodities sold to railroads to be used in producing transportation service, they are not equally necessary. And obviously, no matter what the price or the manner of use, the things that are necessary will invariably promise a more regular market than

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host of things which all of us buy to use up in our daily living, are consumers' goods. On the other hand, the kind of commodity sold to a manufacturer or public service corporation for use in the production of something else, like locomotives, is called "producers' goods." To this category belong machinery of every description, and equipment for manufacturing and public service corporations. The principle, here described, would take the following form: the earnings of businesses engaged in the production of consumers' goods are less subject to fluctuations due to business booms and depressions than the earnings of businesses engaged in the production of producers' goods.

will any other kind of commodity. At the opposite end of the scale are the foibles of fancy and those things designed to satisfy restricted or eccentric tastes; and in the middle ranges are to be classed the great multitude of manufactured goods, which add, with varying degrees of importance, to the efficiency of labor, or to the safety, comfort, and distinction of the consumer's life.

From these observations it will be possible to formulate a general law. *Earnings of corporations engaged in the production of inexpensive necessities, sold to and immediately consumed by the ultimate consumer, are most regular and most subject to reliable prediction; earnings of corporations engaged in the production of costly commodities, sold to other producers and not absolutely necessary for the operation of their businesses, are least regular and least subject to reliable prediction.* These are the extreme cases. Between these extremes lie the majority of corporate businesses, and the relative predictability of their earnings will be determined according as they tend toward one extreme or the other.

And this law has ample justification in experience.[23] It is empirically illustrated by the two commodities already cited —matches and locomotives. For the purposes of illustration it is fortunate that these two commodities are manufactured by large corporations whose earnings are matters of public record. The following represent the gross and net earnings of the Diamond Match Company during a period of 16 years, down to 1916.[24] Unfortunately the gross volume of business is not published.

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[23] This is particularly true of the fluctuation in gross and net earnings of the equipment companies.

[24] The earnings after 1916, for the remainder of the period of the Great War, were considerably affected by speculative transactions in timber, not directly connected with the match business.

NET EARNINGS OF DIAMOND MATCH COMPANY

	Net Earnings	Deviation of Annual Net Earnings from the Mean Average for the Period ($1,907,948)
1900	$2,014,839	+$106,891
1901	2,021,072	+ 113,124
1902	1,957,674	+ 49,726
1903	1,824,089	− 83,859
1904	1,653,369	− 254,579
1905	1,772,280*	− 135,668
1906	1,993,770	+ 85,822
1907	2,296,076	+ 388,128
1908	1,894,724	− 13,224
1909	1,719,782	+ 88,166
1910	1,850,482	− 57,466
1911	2,024,013	+ 116,065
1912	2,120,103	+ 212,155
1913	1,775,816	− 132,132
1914	1,615,726*	− 292,222
1915	1,993,366†	+ 85,418

Average net earnings for 16 years	$1,907,948
Average deviation of annual net earnings from the mean average of the period	144,665
Maximum deviation	388,128
Percentage of maximum deviation to mean average	20.3%
Percentage of average deviation to mean average	7.1

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*Does not include a deficit of $73,492 on a California lumber speculation.
†Not including fictitious reserve for higher cost inventories.

In the whole history of American industrial consolidations, it is probably impossible to find the earnings of a single large business as constant, uniform, and "smooth" as those represented by this table. The company was doing millions of dollars of gross business. Yet in 1900 the net earnings were within less than a hundred thousand dollars of those of 1915. The panic of 1907 had very little effect on the net earnings and the "boom" period of 1905 to 1907 could not be detected from an inspection of these earnings. Even large public utilities, such as water companies, whose earnings are proverbially constant, can hardly show a record of regularity and stability equal to this.

In contrast to these figures are those of the American Locomotive Company, covering essentially the same period except that the last three years of the Great War are included. (The company was organized in 1901.)

GROSS AND NET EARNINGS OF AMERICAN LOCOMOTIVE COMPANY

Year Ending June 30	Gross Earnings	Deviation of Annual Gross Earnings from the Mean Average for the Period ($40,285,800)	Expenses	Net	Deviation of Annual Net Earnings from the Mean Average for the Period ($5,055,240)
1902	$26,398,394	−$13,887,406	$23,291,217	$3,107,177	−$1,948,063
1903	33,105,725	− 7,180,075	28,052,315	5,053,410	− 1,830
1904	33,068,750	− 7,217,050	27,404,985	5,663,765	+ 608,525
1905	24,150,201	− 16,135,599	19,796,533	4,353,668	− 701,572
1906	42,547,876	+ 2,262,076	36,085,371	6,462,505	+ 1,407,265
1907	49,515,486	+ 9,229,686	42,744,381	6,771,105	+ 1,715,865
1908	37,484,417	− 2,801,383	32,497,627	4,986,790	− 68,450
1909	19,008,634	− 21,277,166	17,665,962	1,342,672	− 3,712,568
1910	32,203,392	− 8,082,408	29,605,443	2,597,949	− 2,457,291
1911	40,649,385	+ 363,585	36,526,515	4,122,870	− 932,370
1912	30,449,452	− 9,836,348	28,117,547	2,331,905	− 2,723,335
1913	54,868,175	+ 14,582,375	48,041,691	6,826,484	+ 1,771,244
1914	29,987,438	− 10,298,362	27,425,187	2,562,251	− 2,492,989
1915	9,303,296	− 30,982,504	10,445,900	−1,142,602	− 6,197,842
1916	59,316,016	+ 19,030,216	48,245,582	11,070,434	+ 6,015,194
1917	82,213,845	+ 41,925,045	72,614,654	9,599,191	+ 4,543,951
1918	80,588,071	+ 40,302,271	70,358,566	10,229,505	+ 5,174,265

Average gross earnings for 17 years	$40,285,800
Average net earnings for 17 years	5,055,240
Average deviation of annual *gross* earnings from the mean average of the period	15,023,327
Average deviation of annual *net* earnings from the mean average of the period	2,498,330
Maximum deviation for gross earnings	41,925,045
Maximum deviation for net earnings	6,197,842
Percentage of maximum deviation to average gross earnings	104.1%
Percentage of maximum deviation to average net earnings	122.6
Percentage of average deviation to average gross earnings	37.5
Percentage of average deviation to average net earnings	50.0

The contrast of these figures to those of the Diamond Match Company is remarkable. Following the panic of 1907 the gross earnings of the locomotive company fell off nearly a half, from over $37,000,000 to $19,000,000; and the net earnings declined from $5,000,000 to $1,250,000. Even more conspicuous is the effect of the Great War. In 1915 the gross earnings were less than half of any year in the company's history and the year's business resulted in an actual operating deficit of over $1,100,000. The next year the gross business was $60,000,000—over six times as great—and the net earnings were over $11,000,000—an amount in excess of the total gross receipts of the previous year.

These comparative statistics covering the earnings of the Diamond Match Company and the American Locomotive Company are illuminating. In the former case the average deviation from the mean average for the entire period was only 7 per cent of this mean average for the net earnings. In the case of the Locomotive Company, on the other hand, the average deviation from the mean average was 50 per cent of this mean average. The variability of the net earnings of the locomotive company was seven times as great as that of the match company.

The extremes of variation, probably unprecedented in the history of the modern business corporation, are shown by the influence of the war on businesses engaged in the production of war materials.[25] But extreme variations of this character are so unaccountable, and therefore unpredictable, that such anomalies can have little influence on any theory of dividend regularity. They are interesting merely, as indicating the extreme limits of variability of earnings of industrial enterprises under the most extraordinary circumstances.

In the field of public service corporations there are some remarkable contrasts. A private water company appears not affected in the least by an industrial boom or depression.

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[25] For example, the following figures represent in summary form the net earnings of the Bethlehem Steel Corporation, after reasonable allowances for repairs and maintenance, but before the setting aside of reserves for depreciation and extraordinary losses.

1905	$3,622,475.50	1912	$5,114,439.98
1906	2,011,368.34	1913	8,752,671.44
1907	2,642,178.07	1914	9,649,667.71
1908	2,196,172.04	1915	24,821,408.25
1909	2,993,536.31	1916	61,717,309.58
1910	4,524,141.30	1917	53,979,360.08
1911	4,792,713.53		

People drink as much water and wash as often at one time as another. A gas company, operating in a suburban district, will actually show greater net earnings during a depression than during a period of pronounced business activity because, while its gross receipts remain relatively constant, it is forced to pay more for coal and oil at a time of great demand for these commodities than when general business is at a standstill and the demand for coal and oil is small. On the other hand, the earnings of an electric power company serving an industrial community and supplying current for factories will fluctuate directly with general business conditions. The predictability of the gross earnings of any public utility will, in general, depend on the relative number of domestic as compared with industrial customers; and the predictability of its net earnings will depend on the relative proportion of the total receipts that are absorbed by fixed charges. This latter statement rests on the presumption that, in general, the larger the proportion of total expenses absorbed by interest on capital, the more constant will be the net earnings. The experience of the vast majority of local public utilities during the period of the Great War bears out this general observation with remarkable precision.

These general principles, then, underlie any attempt to predict earnings and through the prediction of earnings to determine a regular rate of dividend disbursement. For in the end the regular dividend is a matter of arithmetical averages during a series of years. The extreme fluctuation in the net earnings of the American Locomotive Company in itself in nowise affects the policy of paying regular and dependable dividends. This company has paid the 7 per cent dividend on its preferred stock every year since it was organized in 1901. In two of the years, 1909 and 1915, the preferred stock dividend was not earned. It was paid nevertheless. And this course was eminently wise, because the reserves accumulated during years of large earnings were ample to safeguard the general credit of the company.

If a conservative policy of regular dividends is followed, it is reasonable to expect that more money will accumulate in the undistributed profits account than the usages of the business require. Under such circumstances the directors may feel warranted in declaring an additional distribution in excess of the regular dividend. This should be called an "extra dividend" to indicate to the stockholders that the increase is not regarded by the directors as permanent. This matter of a name is very important, for the natural optimism and avarice of the average stockholder will lead him to regard the action of the directors as an implied promise to continue the higher dividend rate in the future. The practice is very common with mining companies of clearly specifying the increased dividend as an "extra" dividend if the unusual earnings have arisen from a factitious rise in the price received by the mine for its metal.[26] In all cases, however, it is of the utmost importance not to deceive either the present stockholders or those who might be induced to buy the stock on the basis of the increased dividends. Some corporations have gone so far as to have a separate check made out for the extra dividend, so that under no circumstances will the stockholder confuse the additional payment with the regular payment.

Especial care should be exercised by the directors that the "extra" dividend is not made the occasion of stock manipulation or misrepresentation. It frequently happens that speculators will use advance information of a probable extra dividend as the occasion for forcing the price of the stock to inordinate levels, in the expectation of unloading it on the credulous public as soon as the extra dividend is actually declared. This is one fact that explains the frequent rise in market price of a stock during the period immediately before the declaration of an extra dividend, and the equally abrupt fall as soon as the dividend has been actually declared.

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[26] During 1914 and 1915 practically every copper mine in the world increased its dividend disbursement. From an average of 16 cents a pound, metallic copper rose to an average of 31 cents. In distributing these additional dividends most of the old-established American mines called them "extras." And it is interesting to note that the market price of the shares did not rise to such levels as would be normally justified had the investing public assumed the new dividend rates to be permanent. The unusual disbursements were regarded as merely temporary incidents to inflated war prices.

In the few cases in which it seems advisable to declare a dividend, although the money cannot be readily withdrawn from the business, it is customary to pay the dividend in some form of security. This may be either bonds, scrip, or stock.

A bond dividend is rarely used. Only in cases where it is clear that the corporation has ample permanent property and assured earning capacity to permit it to "mortgage the distant future," as it has been called, is it wise to declare bond dividends. Only one corporation of prominence, the Adams Express Company, has used this form of distribution. And in this case the security deposited as the basis of the bond issue consisted of a large fund of miscellaneous stocks and bonds of railroads and other corporations, the market value and earnings of which were independent of the business and earnings of the express company.[27] On the whole, however, in spite of the large equity behind the Adams Express Company's bonds, this plan was probably unwise, for it segregated the company's most valuable assets and made the decline in the company's stock more abrupt, when the express business itself felt the effects of the Interstate Commerce Commission's reduction in rates.

Bond dividends are, on the whole, objectionable for a number of reasons. If they are paid on one class of stock only when several classes of stock exist they are certainly burdening the corporation with direct liabilities and increased fixed charges without benefiting at least one class of stock. Moreever, they lend themselves easily to the presumption that the directors are seeking to give to the stockholders the impression that the corporation is sounder, financially, than it really is. For if the needs of the corporation to conserve its cash resources are sufficiently great to require it to withhold what the accounts indicate should be divided among the stockholders then its credit demands that its funded liabilities shall not be increased unless the corporation is itself benefited through the receipt of new money. It is interesting, too, to observe that public service commissions have sometimes frowned upon the declaration of bond dividends by public service corporations on the ground that a corporation ought not to incur a liability to divide its future assets without receiving some present or future benefit in return.[28]

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[27] Further discussion of this bond issue, see Volume I, Chapter III, page 58.

Much more frequent than bond dividends are the dividends in notes—or scrip, as they are called. "A scrip dividend," as one writer aptly put it, "divides the profits but defers the actual distribution of the assets."[29] A plausible but not a thoroughly reasonable excuse for such dividends is that of heavy construction. The accounting system may show clearly that the business has earned a liberal net profit, but at the same time appears to have a need for all the available money for developments or extensions. Although this is the ordinary excuse advanced for paying scrip dividends when no money is available, it is usually based on unsound premises and often on false accounting methods.[30] A more plausible excuse for the issue of scrip dividends than contemplated improvements is that, owing to general business uncertainty, the corporation prefers to hold the money in its treasury rather than to distribute it among its stockholders. In such cases there is no question of a mere bookkeeping profit, for the money is presumed to be actually in hand.[31] But there are numerous cases, especially among public service holding companies, in which this scrip dividend is a mere device for postponing the unpleasant confession that the company is without sufficient resources to pay any dividends at all.[32] By questionable methods of accounting which neglect adequate depreciation and other reserves, it may be made to appear that the business of the year has yielded a net profit. The management then

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[28] "By the declaration of a dividend payable in the future no part of the surplus has been transferred to the stockholders. The directors themselves have no more and no less power over it than was possessed by them before the declaration of the dividend. The making of such a dividend is not a loan by the stockholders to the company. . . . In its essential nature it is nothing but a promise to pay to the stockholders at a future time a sum of money, and for this promise it receives no consideration whatever." Re Erie R.R. Co., 1 Pub. Ser. Com. 2nd Dist. N. Y. Rep. 115.

[29] Ignatius, M. B. The Financing of Public Service Corporations, 134 (1918).

[30] One of the well-known, early cases of the unwise use of scrip dividends is that of the Northern Pacific Railroad during the Villard mismanagement. Through his holding company, the Oregon and Transcontinental Company, Villard secured control of the old Northern Pacific in 1881. In order to obtain the support of

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certain stockholders, Villard had promised to declare a dividend on the old preferred stock. The road was then spending very large sums for construction and no money was available for dividends. Accordingly Villard announced that large amounts of the bookkeeping surplus accumulated between 1875 and 1882 had been expended on improvements. Then a dividend of 11 per cent was declared on the preferred stock, and paid in scrip or notes, bearing 6 per cent interest and payable in five years. The same year the company's expenditures for construction far exceeded its receipts from the sale of bonds, stock, and from its reinvested earnings. The scrip dividend amounted, in effect, to a mere increase in its liabilities without any corresponding or compensating advantages. For details see Daggett, S., Railroad Reorganization, 273 (1908).

[31] A good example of the wise use of the scrip dividend for the conservation of the cash reserves is afforded by an instance drawn from the history of the R. J. Reynolds Tobacco Company. During 1913 the company obtained a net profit of $2,862,567, or over 28 per cent, on the outstanding stock of $10,000,000. Yet during the year the company built three large new concrete plants and spent a large amount to install cigarette machinery. Altogether $600,000 was spent in new construction and the net current assets were increased over $2,500,000 in order to meet the demands of the business. Clearly the stockholders were entitled to a return on their holdings, yet the entire earnings had been turned back into the business. A cash dividend could be paid only through increased borrowings, which the management was unwilling to undertake. Instead they paid 3 per cent quarterly dividends in scrip, which bore 6 per cent interest to January 1, 1915, at which time it was to be paid off in cash, or funded into preferred stock at the option of the company.

[32] The Standard Gas and Electric Company of Delaware is a large holding company controlling securities of operating electric, gas, and traction companies in the south and west. Its income arises entirely from interest and dividend disbursements—mostly the latter—of its subsidiary companies. The dividend on the preferred stock is 8 per cent, cumulative, and was paid as such from September 15, 1911, to June 15, 1913. Meanwhile the subsidiary companies had been making large and frequently unwarranted expenditures for new construction; these must be financed by the sale of new securities or by the retention of earnings. The net earnings of the parent company fell off from $2,250,000 in 1912, to $1,500,000 in 1913, while the interest charges rose from $750,000 to $815,000. The payment of the full preferred stock dividend, however computed and however paid, involved a deficit. On September 15, 1913, when the seriousness of the conditions confronted the parent company, the preferred dividend was paid in interest-bearing scrip, thereby conserving the cash of the subsidiary companies. The dividends from September 15, 1913, to September 15, 1915, were paid in scrip. Subsequently, practically all this scrip was refunded into twenty-year 6 per cent gold notes—the unsecured debentures of the company. By strict economy and able management the company was able by 1918 so to improve its earnings and its credit that cash dividends were resumed.

points out that the demands of the business were such that the year's profit was absorbed by the heavy new construction, which increased the value of the property assets. On the basis of this apparent increase in the property account the management purports to feel justified in incurring a new liability in the form of the scrip dividend. The process may be repeated year after year, and as no real money is paid out in dividends, the actual operation of the company is not hampered. Ultimately the deceit will be discovered through the uncovering of the fictitious figures at which the property account is carried, but in the meantime the managers will have been able to maintain the stock at a market price higher than if no dividends whatever had been paid.

Bond and scrip dividends are, in truth, merely special forms of a large generic type of dividends which, collectively, might be called security dividends. Of this class by far the commonest and most important are stock dividends.

Stock dividends as a class owe their origin to financial success. Scrip dividends, quite generally, are substitutes for cash dividends and, therefore, an outward sign of at least temporary weakness. But this, except in rare cases, is not true of stock dividends, although a desire to effect a speculative and unjustifiable enhancement in market price is often the dominating motive in leading directors to declare stock dividends.[88] In other cases the wisdom of declaring stock dividends is very much open to question, notwithstanding the fact that such dividends may be fully justified by the books of account of the corporation. And in general we may lay down two guiding principles, one of accounting and the other of general business expediency, which should control the declaration of stock dividends. Both of these are important.

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[88] Perhaps the most notorious case of deceit through the declaration of a stock dividend is that of the old National Cordage Company. The following account explains itself: "Sometime during the autumn of 1892, a prominent member of the New York Stock Exchange said to President Waterbury, 'Your stock is selling too high,' meaning that, for speculative purposes, it would be better to have the stock selling at $70 a share rather than $140, even though the capitalization had to be doubled. This was especially important as the Keene pool was about to be liquidated and a new pool formed. It was essential for the success of the second pool that the prices of the stock should be well maintained. Accordingly President Waterbury presented the idea to the Board of Directors, who decided to issue, in January, 1893, a 100 per cent stock dividend. The book value of the subsidiary plants was marked up to correspond with the inflation of the capital assets. The common stock was increased from $10,000,000 to $20,000,000. At the time, the Directors stated that the new issue was to be given stockholders 'to represent about $11,000,000 of assets acquired by the Company since its formation, and which it is the policy of the Company to hold intact.' Simultaneously the Company stated it would be its policy 'at the end of the first fiscal quarter after the distribution of the new stock,'

The first principle that should control the declaration of a stock dividend is that the actual net assets—after all reasonable deductions for depreciation and special reserves—shall be appreciably more than the outstanding stock. This means that neither the plant assets, nor the good-will account, nor any "revaluation" assets should be marked up in order to show an increase of value other than through the actual reinvestment of surplus earnings in the business. The bookkeeping procedure in connection with the declaration of a stock dividend should consist merely of a transfer from the surplus account—accumulated through annual profits—of an amount sufficient to cover the new issue of stock. If this principle is carefully observed, it follows that stock dividends should never be tolerated unless the actual earnings to a considerable amount are employed by the management to construct new buildings and equipment, or to increase the net quick assets in order to maintain or strengthen the general credit position of the company. Whether or not earnings shall be reinvested in property or paid out in dividends is merely a matter of business judgment. But that there must be actual earnings to do either, is fundamentally a matter of simple business honesty, to be expressed outwardly in the accounts. It is not a matter of judgment or expediency or anything of the kind, but of truth.

The other principle to be observed is that the stock dividend should not be declared, even when the invested profit and loss surplus is ample, if the credit position is not fundamentally

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to declare dividends equivalent to 10 per cent on the preferred and 7 per cent on the new common stocks." Dewing, A. S., The National Cordage Company, 23 (1913). Announcement see 56 Chron. 127 (Jan. 1893).

sound. The declaration of a stock dividend implies that the stockholders' capital has been invested in the business, and that it would be unwise to withdraw this capital. It points to a marked discrepancy between the capital investments and the capital stock, a discrepancy which the directors propose to remedy by increasing the capital stock. But it implies also that the business is fundamentally sound, for were it not fundamentally sound, the stock dividend would degenerate into a mere bookkeeping artifice. The company should not, therefore, represent that it has capital to divide in the form of a stock dividend, if it seeks to secure at the same time more capital from outside sources. The mere bookkeeping surplus is not enough, for the soundness—the solvency, even—of the business demands that a balance between the fixed assets and the quick assets be fully maintained. Mere invested capital, mere plant assets, are not enough. In order to have a sufficient excuse for arbitrarily marking up the capital stock, the business must have maintained its strength through maintaining a proper equilibrium between its fixed capital and its working capital. And although a stock dividend may not deplete the quick assets, as a cash dividend does, it is an outward sign of an excess of capital in the business not in the least consistent with outside borrowings. If such borrowings are resorted to, the stock dividend is the sign of a strength which does not exist.

Furthermore, in addition to the principles enumerated above, great care should be taken to avoid the impression that the stock dividend is declared for the purpose of aiding the manipulation of the market price of the stock by those in control of the company.[34] A policy of declaring stock dividends is not pursued, oftentimes, with any intent to deceive, yet the utmost care should be taken by the management of a corporation not to allow such a policy to be used by investors and speculators as a pretense for bidding up the market price of the stock above its inherent value. Especially is this true when the directors of a corporation have acted in such a manner as to create a feeling that a stock dividend is to be expected at a regular time. In August, 1908, the United Fruit Company initiated a stock dividend of 10 per cent on its outstanding capital stock. This action was based on a large accumulation of property resulting from an investment of earnings. This accumulated surplus amounted to 55 per cent of the capital stock, and the declaration of a stock dividend was justified by the available assets. In November, 1909, the company declared another stock dividend of 10 per cent—also out of accumulated surplus. Again in November, 1910, it declared for the third consecutive time the 10 per cent stock dividend. In the winter of 1911, the stock rose to $200 on the presumption that the declaration of an annual stock dividend, occurring three successive times, had become a regularly established practice. Nor were the stockholders disappointed, for another stock dividend of 10 per cent was paid in December, 1911. As the autumn of 1912 approached the stockholders naturally expected a continuation of the policy and the stock advanced to $208.50 a share. The stockholders were disappointed, for instead of a stock dividend they were offered new stock at $150 a share. Had the directors of the company declared their stock dividend at irregular intervals and in irregular amounts they would not have been—as they were at the time—open to the accusation of using the presumption of the stockholders in favor of a regular annual stock dividend as a means for manipulating the market price of their stock.[85]

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[34] For a notorious case, see preceding note. At the time of the fictitious stock dividend of the old National Cordage Company, referred to in the preceding note, *The Boston Herald* made the comment, "Since every dollar of the new $10,000,000 capital is now probably represented by outstanding securities, stocks and bonds, the new issue of stock partakes of the nature of liquid capital, commonly called water, all of which water the investing public is expected to acquire from the speculative pool and other shareholders under the delusion that present ability to pay dividends upon the enlarged capital constitutes it a substantial investment. How the investing public enjoys being deluded!" *The Boston Herald,* January 28, 1893. Quoted in Dewing. A. S., The National Cordage Company, Supplement, 33 (1913).

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[85] The financial history of the United Fruit Company, in the years during and immediately following its four sucessive stock dividends, presented a lesson in what

one might call financial mismanagement resulting from too great prosperity. The following columns of figures state the case accurately.

SUMMARY STATEMENT OF UNITED FRUIT COMPANY

Year Ending	Capital Stock	Short-time Notes	Net Profits	Fixed Charges	Cash Dividends		Stock Dividends	
					%	Amount	%	Amount
Aug. 31, 1899	....	....	....	....	...	....	..	....
1900	$11,230,000	$3,500,000	$1,813,811	$242,016	10	$1,119,257	..	....
1901	12,369,500	4,255,000	1,251,976	153,418	9	1,084,768	..	....
Sept. 30, 1902	12,369,500	4,012,500	2,446,517	260,700	8½	1,051,408	..	....
1903	12,575,500	3,944,000	2,077,749	229,595	7	877,150	..	....
1904	15,782,000	2,446,000	2,077,775	137,426	7	967,675	..	....
1905	17,485,000	2,219,000	1,617,721	Cr 15,085§	7	1,167,793	..	....
1906	17,961,000	1,670,000	3,900,887	114,354†	7	1,235,745	..	....
1907	18,525,000	2,656,000	6,289,909	99,982	7¾	1,419,350	..	....
1908	21,328,300	1,600,000	4,041,091	94,746	8	1,584,484	10	$1,940,000
1909	21,340,000	5,690,000	4,388,649	220,771	8	1,707,042	..	....
1910	23,474,000	5,532,000	6,552,577	260,583	8	1,877,472	10	2,134,000
1911	27,059,900	9,371,000	5,038,740	327,771	8	2,164,712	10	2,459,900
1912	27,790,500	9,210,000	5,332,113	424,583	8	2,395,788	10	2,705,890
1913	36,594,300	21,468,000	6,197,876	882,245	8	2,927,544	..	....
1914	36,594,300	33,306,000	3,742,247	1,477,336	10	3,659,430	..	....

Year Ending	Special Charges (including depreciation)	Annual Profits Carried to Surplus	Total Surplus	Percentages				
				Stock to	Notes to	Surplus to	Ern'gs (Less Charges) Absorbed by Interest	Ern'gs (Less Charges) left over after Int. and Div.
				Sum of Stock, Notes and Surplus				
Aug. 31, 1899	....	....	$697,608*					
1900	....	$452,536	1,150,144	71%	22%	7%	13%	24%
1901	....	13,790	1,163,934	70	24	7	12	2
Sept. 30, 1902	$294,968	839,442	2,003,376	67	22	11	12	34
1903	209,565	761,439	2,764,815	65	20	14	13	37
1904	579,538	393,136	3,157,951	74	11	15	9	19
1905	129,191	335,822	3,493,774	75	10	16	...	21
1906	520,629	2,030,159	5,523,933	71	7	22	3	52
1907	542,460	4,228,117	9,752,050	60	8	31	2	67
1908	137,461	284,400	10,036,450	65	5	30	2	7
1909	490,482	1,970,354	12,006,804	55	15	31	6	45
1910	500,000	1,780,522	13,787,326	55	13	32	4	27
1911	1,235,685	— 1,149,328‡	12,637,998‡	55	19	25	9	deficit
1912	703,096	— 897,244	11,740,754	57	19	24	9	"
1913	2,749,728	— 361,641	11,379,113	53	31	16	16	"
1914	1,297,287	— 2,691,806	8,687,307	47	42	11	60	"

* Surplus carried forward at formation of company.

§ A large credit item to interest account, comprising bond discount credits, discounts, and miscellaneous interest, amounting to $143,928 more than offset interest on notes amounting to $128,844.

† There is a difference in the method of computing the fixed charges as between 1905 and 1906. In 1905 § represents merely a balance of the various interest and amortization amounts. In 1906† the fixed charges represent interest on notes alone, and the other debit and credit interest items are included in net profits.

‡ The published accounts, after 1910, show a larger surplus. The company adds its "premium on stock," often resulting from a mere exchange of property, directly into its profit and loss surplus. This is not done in these tables.

The substantial excuse, upon which rests the expediency of stock dividends, is the necessity or the wisdom of investing a large proportion of earnings in the business when justice, or even the enlightened self-interest of the stockholders requires that the earnings be distributed among them. The stockholders of a business are entitled to its profits. Without this hope of profit they would not have invested their capital. Apparently there is a marked difference among even successful corporations in declaring stock dividends. Some avoid the policy altogether, even though a very large proportion of the earnings was invested in new plants and equipment.[36] Others, on the contrary, pursue a liberal policy, and in many cases a too liberal policy, in declaring stock dividends, so that, through a period of years, the returns to stockholders from stock dividends often approximate that received from cash dividends. Taking a random selection of 31 industrial corporations that declared stock dividends in the ten-year period from 1908-18, the average annual return from the cash dividends from these corporations under review was 9.5 per cent while that from the stock dividends, taking the stock at its par value, was 5.4 per cent. In 9, or nearly a third of the cases, the average annual return from the stock dividends

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Certain facts are evident from these figures. In 1907, the year before the series of stock dividends was initiated, the funded notes represented only 7 per cent of the sum of the stock, notes, and accumulated surplus; while 67 per cent of the annual profits were left over after the payment of dividends and interest. In 1913, within a few months of the payment of the last of the series of annual stock dividends, the United Fruit Company was compelled to borrow $12,000,000 of working capital thereby doubling its note debt; and in the succeeding year this was increased again by the issue of approximately $12,000,000 more notes. So that in 1914 its note issues were twelvefold greater than in 1907. Further, in 1914, with a stock and note capital of $70,000,000 the company earned in net profit only a little over half what it had earned in 1907 with a stock and note capital of only $21,000,000. Its profit and loss surplus had, meanwhile, been reduced by excessive cash and stock dividends over a million dollars. In 1914 the fixed charges on the funded notes absorbed 42 per cent—six times as much as in 1907—of the annual profits; while there was a deficit of over $2,000,000 left after depreciation, fixed charges and cash dividends.

[36] This policy was followed consistently by the Standard Oil Company of New Jersey down to its dissolution. At the very beginning the Standard Oil consolidation was undercapitalized, and throughout its history the directors followed the policy of reinvesting a very large proportion of the surplus earnings in the equipment and working capital necessitated by their growing business. Nevertheless, no stock dividends were declared until after the dissolution of the consolidation following a federal court decree.

exceeded the average annual cash dividends during the period.[87] Stock dividends have, on the whole, been declared very rarely among railroads.[88] The policy would be tolerated

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[87] Industrial Corporations, Period 1908-1918

Name ("Company" omitted)	Total Cash Dividends (per cent per share)	Average Cash Dividends (per cent per share)	Stock Dividends (per cent)	Average per Year
American Radiator	122.50%	12.50%	70.00%	7.00%
American Zinc, Lead and Smelting	13.00	1.30	50.00	5.00
Barrett	72.00	7.20	12.00	1.20
Bethlehem Steel	57.00	5.70	20.00	2.00
Bush Terminal	38.00	3.80	17.50	1.75
Colt's Patent Firearms Mfg	203.00	20.30	100.00	10.00
Consolidation Coal	62.00	6.20	79.00	7.90
Cuban American Sugar	130.50	13.00	40.00	4.00
Cudahy Packing	15.75	1.60	50.00	5.00
General Chemical	105.50	10.50	30.00	3.00
General Electric	80.00	8.00	34.00	3.40
Goodyear Tire and Rubber	120.00	12.00	13.00	1.30
Ingersoll-Rand	115.00	11.50	70.00	7.00
Lehigh Valley Coal Sales	81.50	8.10	55.00	5.50
P. Lorillard	82.00	8.20	20.00*	2.00
Niles-Bement-Pond	72.50	7.25	40.00	4.00
Nova Scotia Steel	36.75	3.70	40.00	4.00
Owens Bottle Machine	110.00†	11.00	128.30	12.80
Packard Motor Car	23.00	2.30	100.00	10.00
Pittsburgh Coal‡	5.00	.50	33.00	3.30
Procter and Gamble	166.00	16.60	24.00	2.40
Quaker Oats	111.00	11.10	63.20	6.30
Ray Consolidated Copper	124.75	12.40	5.00	.50
Safety Car Heating and Lighting	94.00	9.40	100.00	10.00
Sears, Roebuck	68.50	6.80	108.30	10.83
Singer Sewing Machine	140.00	14.00	100.00	10.00
Swift and Co	82.00	8.20	83.30§	8.30
United Fruit	82.00	8.20	40.00§	4.00
United Shoe Machinery	106.00	10.60	40.00	4.00
Westinghouse Air Brake	174.00	17.40	78.30	7.80
Weyman-Bruton	192.00	19.20	20.00	2.00
Average		9.50%		5.40%

*This stock dividend was in lieu of the regular cash dividend.

†8 per cent of a large cash dividend in 1918 was in Liberty bonds, but it was considered as cash.

‡Considered as one company (the old Pittsburgh Coal Company and the new (organized 1917) Pittsburgh Coal Company of New Jersey).

§ Part of these stock dividends was in the form of "cash dividends," but such "cash dividends" could be immediately used by the stockholder to purchase new stock at par, although the market value was above par. In all respects, except the mere form of the vote of the directors, such dividends were stock dividends. In the case of the United Fruit Company the stock dividends were entirely of this character.

[88] The reasons that account for this particular difference of policy, as between industrials and railroads, is not founded on any substantial accounting or economic basis. On the contrary the practice of American railroad managers—to some extent since the early days of railroading, and quite conspicuously since the panic of 1893—has been to put a considerable portion of earnings back each year into the property. The "dollar for property for every dollar of dividends" policy, notable on such railroads as the Pennsylvania and the Burlington, would fully justify frequent stock dividends, especially as a railroad does not require large amounts of liquid capital. But the railroads have consistently pursued the policy of issuing new stock only for property or money, except for rare instances mentioned above or in notes 40 and 41.

only by very successful railroads and these, with the exception of the Delaware, Lackawanna and Western Railroad[39] have not declared stock dividends of recent years. Once in a while a subsidiary railroad corporation will declare a stock dividend to its parent, presumably for the purpose of adjusting inter-company accounts,[40] but these cases are not significant. In several rather notable instances a stock dividend has been used as a means of inflating the stock of a railroad, prior to leasing it to a larger railroad. In this way the rental, a percentage of the outstanding capital stock, is conspicuously increased.[41] A notable, if not notorious case of such an inflation before consolidation was in connection with the original merger of the New York Central and the Hudson River Railroads in 1868.[42]

Stock dividends, among public utility companies, present a peculiar history. They have, as in the case of railroads, been seldom declared on the stock of local utilities.[43] On the other hand certain large and successful public utility holding companies have pursued the policy of declaring regular annual stock dividends. This uncommon practice, perhaps, is deserving of more than passing comment. The United Gas Improvement Company,[44] after a long period of successful operation, finding that the actual value of the equity behind the common stocks of the local utilities held in its treasury had increased since they had been purchased through the reinvestment of earnings in the properties, decided in 1896 to distribute some of this increase in the form of a stock dividend. Accordingly a stock dividend of 15 per cent was declared. Considering the fact that the United Gas Improvement Company had itself invested its earnings in the plants of the operating companies or else permitted these operating companies to invest a large share of their own profits in their physical properties, this dividend could not be criticized as in any way a misrepresentation, notwithstanding the fact that the operating companies were borrowing—by long-term bonds—large sums for extensions not paid for out of earnings. Another stock dividend, based on the same assumption was paid in 1910.

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[39] Besides large cash dividends paid almost continuously for over half a century—7 per cent from 1881 to 1904 and 20 per cent from 1904 to 1919—the company declared, in 1909, a dividend of 25 per cent in money, 25 per cent in the Delaware, Lackawanna and Western Coal Company and a stock dividend of 15 per cent in its own stock. In the autumn of 1911 it declared a dividend of 35 per cent in the stock of an important leased subsidiary.

[40] An instance of this, is the case of the Butte, Anaconda and Pacific Railway. Of its total capital 51 per cent is owned by the Anaconda Copper Company and 49 per cent by the Chicago, Milwaukee and St. Paul Railroad. Cash dividends have been paid, not exceeding 6 per cent per annum. In 1912 the company paid a stock dividend of 150 per cent.

[41] There are several such cases from the recent history of the Pennsylvania Railroad. The Delaware Railroad, an old, long-established railroad in Delaware was leased to the old Philadelphia, Wilmington and Baltimore Railroad on a somewhat intricate basis by which the lessee operated the road at cost, paid 6 per cent on the stock, and divided the remainder, half to the lessee and half to a sinking fund. In 1910, the Delaware Railroad having proved very profitable and the Philadelphia, Baltimore and Washington Railroad (the successor by consolidation of the old Philadelphia, Wilmington and Baltimore) wishing to simplify the terms of its lease, permitted the Delaware Railroad directors to declare a stock dividend of 70 per cent and a cash dividend of 25 per cent and then amended the old lease so as to provide for a fixed rental of 8 per cent on the enlarged stock of the Delaware Railroad.

[42] Just prior to the consolidation of the two railroads, and with this very matter in prospect the old New York Central Railroad declared 80 per cent stock dividend. The act was condemned as "an unconscionable act of stock watering." Yet when the whole matter came under the review of the United States Supreme Court in connection with an internal revenue tax case, the court, in order to justify the government in assessing and collecting a tax on the dividend, admitted that the company "had earned moneys greatly in excess of their current expenses . . . the excess of earnings beyond current expenses had been expended in constructing and equipping their railroad and in the purchase of real estate and other properties with a view to the increase of their traffic. Accumulations of the kind had been appropriated in that way until the sum amounted in the aggregate to a sum equal to eighty per cent of the capital stock of the company." The whole case is a classic in the literature of railroad consolidation. See Volume IV, Chapter IV, note 54. See also Hepburn Committee Report; also Bailey v. N. Y. Cent. R.R. Co., 22 Wall. 604, 632 (1874).

The regular stock dividend policy of public utility holding companies, based on the assumption that there is, ordinarily, a regular and uninterrupted increase of equities held by the holding company, is best illustrated by the experience of the American Light and Traction Company.[45] This company was organized in 1901 for the explicit purpose of assuming the ownership of the common stocks of about a dozen gas and electric companies situated in various parts of the United States. It was successful from the beginning. In 1904 it began to pay a small cash dividend on the common stock, which was slowly increased until 1911 when a regular annual dividend rate of 10 per cent was established. Meanwhile the earnings increased steadily, always remaining about twice the sum of the preferred and common stock cash dividends. Yet rather than increase the cash dividends, when a considerable part of the surplus earnings could be advantageously returned to the individual operating properties for extensions, the company began in 1909 to declare an annual stock dividend of 10 per cent on the common stock.[46] This has been maintained uninterruptedly for a period of some years. In 1914 the American Gas and Electric Company, another important public utility holding company,[47] inaugurated stock dividends of 4 per cent per year, after having accumulated a large surplus from earnings. The Cities Service Company,[48] observing probably the beneficial effect of regular stock dividends on the market prices of the American Light and Traction and American Gas and Electric Companies' common stocks, inaugurated a similar policy. After declaring 6 per cent stock dividends on the common stock in 1916 and 1917, the company declared a

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[43] Like the stock dividend of 10 per cent declared on the stock of the Commonwealth-Edison Company in 1913.

[44] For detailed description of this company, see Volume IV, Chapter V, opening paragraphs.

[45] Ibid.

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[46] This is shown, easily from the following table (even thousands):

	Total Net Earnings	Preferred Dividends of 6% ($854,172) and Common Cash Dividends	Percentage of Total Earnings Represented by Total Cash Dividends.	Stock Dividend on Common Stock (10%)	Annual Balance for Surplus Account
1908............	$2,678,000	$1,349,000	50	....	$1,329,000
1909............	3,239,000	1,632,000	51	$1,291,000*	316,000
1910............	3,713,000	1,852,000	50	998,000	864,000
1911............	4,030,000	1,955,000	48	1,101,000	963,000
1912............	4,139,000	2,070,000	50	1,216,000	854,000
1913............	4,343,000	2,195,000	50	1,341,000	807,000
1914............	4,275,000	2,333,000	54	1,479,000	463,000
1915............	5,022,000	2,487,000	49	1,633,000	902,000
1916............	5,648,000	2,656,000	47	1,802,000	1,190,000
1917............	5,023,000	2,842,000	56	1,987,000	195,000

*12½%.

[47] For details, see Volume IV, Chapter V.

[48] Ibid.

"monthly" stock dividend of ½ per cent January 1, 1918. This was increased to a "monthly" stock dividend of ¾ per cent on February 1, 1918, and the impression widely advertised that an increasing stock dividend would be continued, "as long as earnings permitted." In fact the company's directors allowed it to be published broadcast that "it is the announced policy of the company to increase the dividends paid in common stock 3 per cent each year so long as earnings of the company warrant. These stock dividends are to be in addition to the regular rate of 6 per cent in cash per annum." [49] The implied promise has been lived up to so far, 12 per cent in stock dividends having been paid in 1919 and the first few monthly stock dividends of 1920 are at the annual rate of 15 per cent. Yet this flamboyant dividend policy, on the basis of which the Cities Service Company's common stock has been boosted up to over $400 a share can have one and only one outcome.

Another type of security dividend, of considerable prominence since the large issues of Liberty bonds, is that involving a distribution of securities held in a company's treasury. During the Great War many successful industrial corporations made large subscriptions to government bonds. At the same time they obtained extraordinary war profits. A considerable proportion of these war profits was paid over to the United States Treasury in the form of war taxes, but the remainder was still abnormally large. Yet instead of depleting their cash reserves or selling their Liberty bonds to secure working capital these corporations paid special dividends in the Liberty bonds held in their treasuries.

Some corporations acquire the stocks of other corporations for legitimate purposes, but later decide that it is inexpedient or illegal to hold these securities. Accordingly they distribute them as special dividends.[50] In 1919 the United States government forced the packing house of Swift and Company to get rid of certain of its subsidiary companies engaged in food businesses allied to the packing business. The stocks of these subsidiaries were distributed among the stockholders of Swift and Company.

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[49] Manual of Corporation Securities, 1146 (1918).

The whole subject of stock and security dividends has assumed a new importance of late in connection with the income taxes of the federal government and several of the states. Each of the income revenue laws attempts to tax income wherever and however it occurs, with the exception of certain specific exemptions. Stock dividends are not specifically exempted, so that both the federal and state income tax commissioners have tried to tax stock and security dividends. This has been done under the Massachusetts state income tax, without serious objection from the courts, but the Supreme Court of the United States decided in two very important cases[51] that stock dividends are not income. As a result much discussion has arisen,[52] bearing partly on the economics of the distinction between capital and income and partly on the expediency and efficacy of trying to tax stock dividends.[53]

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[50] The United Shoe Machinery Company acquired the stock of the Thomas G. Plant Company. The Plant Company was engaged in the manufacture of shoes—not shoe machinery—but its owner had threatened to enter the machinery line of business. The purchase of the company's stock involved, therefore, merely buying out potential competition, but at the same time the Shoe Machinery Company found itself with the stock of a shoe factory on its hands. Accordingly it distributed the Plant Company's stock in the form of a stock dividend of $6, par value, a share to its own stockholders, payable July, 1916.

[51] Towne v. Eisner, 245 U. S. 418 (1917). Eisner v. Macomber, 251 U. S. 248 (Mar., 1920).

[52] See the exhaustive article by Seligman, E. R. A., 9 Am. Econ. Rev. 517 (September, 1919). Also Fairchild, F. R., and Bond, H. H., 3 Bull. Nat. Tax. Assn. 161 and 237. Also periodical articles appearing extensively in April, 1920, in reference to the leading Eisner v. Macomber case cited above.

[53] The problem is, however, a very interesting and complicated one. It may be approached from four points of view.

Social income. Income is the increase in capital, no matter how arising. In that sense increase in the size of a tree is income quite as much as net profits from the operation of a railroad. But this general conception has no significance for the question of taxation, because of the practical impossibility of assessing the positive changes in capital values wherever and however accruing without reference to individual ownership. To social income the question of the taxation of stock dividends is a matter of no importance. For the stock dividend is merely an objective sign implying—but not necessarily involving—a true increase of social capital and therefore true income, which it is desirable to transfer to other owners.

Taxable income. That portion of the general social income which it is expedient, convenient, and economical to tax. This makes the question of taxation of stock dividends one of expediency for individual social groups—not a question of the strict logic of economic theory.

Accounting income. That portion of general social or economic income which it is possible to reduce to the values of accountancy. All income specially set aside as reserves—or otherwise "earmarked"—as well as all income actually realized through gift or exchange—would be considered income from the point of view of accounting. Here, too, the question whether stock dividends are income has no significance. For if stock dividends are not declared the income will be "earmarked" as surplus, whereas if they are declared the surplus account is reduced to the same extent that the capital stock account is increased.

Personal income. The specific part of the total economic or social income which each person is able to segregate for his personal use. Here stock dividends are of great importance. For if the income of a corporation is paid over in the form of stock dividends it becomes of immediate use to the stockholders, whereas if it is not paid over to the stockholders, they cannot use it, no matter how large the income of the corporation may be.

CHAPTER VII

THE PRACTICAL EXPEDIENCY OF DIVIDEND DISBURSEMENTS

Principles of dividend distribution applied to concrete cases, 114; The small manufacturing business, 114; The small public utility, 118; The small railroad, 121; The local bank, 123; Effect of widespread ownership of common stock, 123; Principles illustrated by resolution of Union Pacific Railroad directors, 124.

The principles governing the declaration of dividends, enumerated in the last chapter, are significant only if applied to concrete cases. This involves a discussion of several more or less typical cases of different kinds of corporate enterprises. The problem is complicated further by the fact that the presence of a sinking fund, income bonds, or preferred stocks in the financial plan of a corporation will ordinarily affect the expediency of the declaration of dividends.

For the purposes of illustration we will consider four typical cases of corporate enterprise—a manufacturing company with both preferred and common stock; a public utility with bonds, a sinking fund, preferred and common stock; a railroad with bonds and common stock; and finally a bank with common stock only. We will assume that each has been in business a year and that each shows approximately the same net profits.

The manufacturing business is engaged in the production of women's medium-grade, McKay-sewed shoes. It is a stable business, having few unusual features. It is subject to strong competition, as comparatively little capital is involved. Although fluctuating with business conditions it is not so mercurial as "fancy" and specialty business is. It can be easily contracted or expanded according to the demand for its product because of the comparatively small proportion of capital invested in fixed assets. In brief, it is thoroughy typical of stable manufacturing businesses.

For the purposes of illustration we will consider ourselves as dealing with a business of medium size. This business, we will assume, started with a paid-up capital of $1,000,000, divided into $500,000 common and $500,000 7 per cent preferred stock. The actual tangible property amounted to approximately $750,000. The preferred stock has been sold to small investors; about half the common stock is owned by the directors and the other half is owned by the public in small lots. The following figures show the results of the first year's business:

Total Sales	$6,500,000
Net Manufacturing Profit before Depreciation	74,000
Depreciation*	5,000
	$ 69,000
Special Reserves for Contingencies	10,000
	$ 59,000

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*Very small in the shoe business as most of the machinery is leased.

With this statement before them the directors are called upon to decide two related but independent questions of dividend policy—shall a dividend of $35,000 be declared on the preferred stock, and if this question is answered in the affirmative, shall the directors distribute some of the remainder to the common stockholders or retain it all in the business.

The advantages to the corporation of declaring the full preferred stock dividend are connected with its credit among investors. If the corporation had little of its own money in the business, practically all being borrowed from the banks, it would clearly be inadvisable to pay any dividends, common or preferred, as such action would be interpreted unfavorably by the banks, as indicative of an "unconservative business policy." But in this case we are assuming that the working capital is procured by the sale of preferred stock to the public, the maintenance of whose good-will, is more important even than that of the bank's. Most of the preferred stockholders bought their shares as investments for the income return, so that a failure to receive the dividends would not only destroy the future market for the company's preferred shares, but would also precipitate such extensive selling by the present holders as to reduce very much the market value. The abrupt fall in market price of shares that have, within the year, been sold ostensibly as investments, would undermine completely the company's credit position. In brief, the ill effect on the company's good name, and on its future opportunities of selling securities to the public, that would come with passing the preferred dividend, would do vastly more harm than the $35,000 could do good if invested in the business. If there is insufficient money in the treasury to meet the dividend payment conveniently, in such a case as this, the amount may wisely be borrowed.

After $35,000 in preferred stock dividends have been paid from the surplus of $59,000, there remain $24,000 that may be either distributed among the common shareholders or retained in the business. Obviously the manufacturing business is subject to fluctuations and the company has no precedent to guide it in predicting the future business. With reference either to the total capital invested or the total sales, $24,000 is a comparatively insignificant amount. It can be easily absorbed if the accountant has overestimated the value of the accounts receivable or the goods in process. It may be extinguished by a sudden fall in the cost of leather. Moreover the arguments which led to the payment of the dividend on the preferred stock do not apply with any force to the dividends on the common stock. The stock cannot have been acquired as an investment for income except by one who misunderstands entirely the nature of investments. Presumably it has no market value—or at best a mere nominal price—so that the failure to pay a dividend upon it will not affect its value. Moreover, the banking and investment world will recognize the full force of the arguments that led to the payment of the preferred stock dividend, so that such an action will not militate against the credit of the corporation, but if the small remaining surplus be paid out, the action will be interpreted as indicative of an improvident financial policy. The market price of the preferred stock will fall. From all points of view, therefore, no dividend should be paid on the common stock.

Even though the second year of the company's history is conspicuously successful, again no dividends should be paid on the common stock for the same reasons as those indicated in the preceding paragraph. The willingness on the part of the directors to put the profits back in the business will have a markedly favorable influence on the company's credit. It will strengthen the investment position of the preferred shares and facilitate borrowing at the banks.

At the end of the third successful year the question of common stock dividend will reappear with increased force. Suppose the results of the three years are as follows:

	First Year	Second Year	Third Year
Total Sales	$6,500,000	$8,400,000	$9,200,000
Net Manufacturing Profit	74,000	101,000	126,000
Depreciation	5,000	5,000	5,000
Special Reserves	10,000	10,000	10,000
Stockholders' Surplus	59,000	86,000	111,000
Preferred Stock Dividend	35,000	35,000	35,000
Surplus Invested in Business	24,000	51,000	76,000
Total Surplus at End of Year	24,000	75,000	151,000

It is now a real problem for the directors whether some of the accumulated surplus of $151,000 may not wisely be distributed among the common stockholders. Clearly the business has been a success. The gross sales have increased nearly 50 per cent and the net profit at a greater ratio, showing that the management has the costs of doing business well under control. The accumulated surplus of $151,000 amounts to over 30 per cent of the total issue of $500,000 of common stock—upwards of half of which has been earned during the current year. The question turns now on the immediate future of the business. In view of the earning statements for the three years, the ability of the company to sell preferred stock in the open market will not be noticeably affected one way or the other by the declaration of a dividend on the common stock. Neither will the payment of a dividend affect the company's credit. Therefore the question narrows itself down to the directors' own judgment of the probable conditions and needs of the business in the immediate future. If they think that the same conditions which have prevailed during the preceding three years will continue, they may wisely declare a small dividend, say 2 per cent, or $10,000. This will reduce the surplus only one-fifteenth, or less than one-eighth of the current year's earnings. On the other hand, if the directors are aware of some possible combination of circumstances that may impair the earning capacity of the company during the next year, it is probable that no dividend should be declared. At all events, the initial dividend on the common stock should be small, and certainly no larger than there is every reason to suppose can be continued for a period of some years.

The second illustration chosen is that of a public service corporation having bonds, a bond sinking fund, preferred stock, and common stock. Suppose a corporation has been formed in some northern state, say New York, to absorb three or four electric light plants in as many adjacent small cities. There are issued $800,000 of 5 per cent first mortgage bonds, $500,000 of 6 per cent cumulative preferred stock, and $1,000,000 of common stock. The bonds have been issued to the original owners or the bankers to pay for the property, and the preferred stock has been sold to small investors in order to get the money for necessary improvements. The common stock is distributed among the promoters, the bankers, and the public. During the first year the earnings are as follows:

Gross Earnings	$300,000
Operating Expenses including Taxes	145,000
Depreciation	10,000
Special Reserves	5,000
Net Earnings	140,000
Interest Charges	40,000
Sinking Fund	16,000
Net Stockholders' Surplus	84,000

As in the preceding case, the preferred stock has been distributed among small investors who bought their shares for the income yield, so that it is almost as necessary to pay the preferred dividends regularly, as to meet the bond interest. Otherwise future extensions to the plant cannot be financed by means of sales of stock to private investors, as preferred stock, upon which dividends are not being regularly paid is practically unsalable.[1] It may be assumed, therefore, that the $30,000 of preferred stock dividends are paid, even though money must be borrowed, immediately, to pay for extensions. It will be easier, probably, to borrow money during the second or third year, even if the money to pay for preferred stock dividends has been borrowed and the general debt of the company increased, than it will be if no preferred dividends have been paid and the debt not increased during the first year.

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[1] The evil results to a company's credit of passing the preferred dividend is shown by the effect on the market price of the preferred shares of many lighting companies during the troublous period of the Great War. The fact that the companies could show the dividends fully earned, but required the money for extensions, did not serve as a mitigating circumstance to excuse the action in the eyes of the great majority of preferred stockholders who had no interest in the welfare of the company other than in the investment return on their shares.

The situation in regard to the common stock is, however, distinctly different. The presumption is that all who own the stock know or ought to know that it represents no actual money investment but merely a chance to participate in the future earning capacity of the company. Stockholders cannot claim to be entitled to a return on stock representing no actual investment. They are, or ought to be, closely associated with the actual management of the property. Their only right to a money return is based on the good results of an administration which has yet to vindicate itself. They may be presumed to be interested in the permanent welfare of the company and not in the temporary market price of their stock—in fact the only market price their stock has is fixed by trading among themselves. The public utility is a monopoly within its limited field; in consequence the common stockholders need fear no interference with their plans, and they will reap the full fruits of their management. Clearly, then, from every point of view it will be inexpedient and unjustifiable to pay a dividend on the common stock.

At the end of three years (following the same steps of reasoning as in the preceding case), the question of a dividend on the common stock presents itself rather differently. Suppose, as in the previous instance of the shoe company, this public service enterprise has been continuously successful during the period. After the payment of the bond sinking fund instalment and the regular 6 per cent dividend on the preferred stock there remain $56,000 for the first year, $71,000 for the second, and $92,000 for the third. The gross revenue has steadily increased. The property has been kept in good physical condition, and the depreciation and other reserves are judged adequate. Of the accumulated surplus of $219,000, nearly $200,000 has been invested in improvements and the remainder is in cash and accounts receivable. Under these circumstances the question of dividends on the common stock narrows itself down to the question of a possible source of additional funds for improvements. This is not important in the case of the shoe business because any increases in the volume of business will be financed by the sale of notes and acceptances, and new investments in fixed capital will be small under any circumstances. But in the case of the electric light company the increase of business must be met by large increases in fixed capital investment, and these ought not, under any circumstances, to be financed by notes or acceptances discounted at the banks. Therefore, if the directors of the company foresee that large improvements will be necessary immediately, the funds for which cannot be obtained cheaply by the sale of bonds or preferred stock, they ought not to pay out any money in dividends. The demands of the public for improvements are imperative and cannot be neglected without jeopardizing the company's most valuable asset, its good-will. If, on the contrary, no considerable improvements are needed, or if funds for these can be obtained easily and cheaply from bankers, then a small dividend, perhaps 1 per cent, may wisely be paid to the common stockholders.

The third illustration chosen is that of a small railroad having bonds and common stock. As in the case of the public service company, the common stock is probably all issued to the promoters and their associates. The entire money cost of the road is somewhat less than the face value of the bonds. Let us suppose that the railroad has been successful during the first year and that, as in the two previous cases, a stockholders' surplus has accumulated after the payment of fixed charges. Clearly a railroad enterprise is, like manufacturing, susceptible to general variations in business conditions. It is more seriously affected by these changes than is the local public utility. All the reasons, therefore, which were advanced against the payment of a dividend during the first year from the surplus of either the manufacturing or the public utility business will apply with equal force here. Since no preferred stock has been issued, the problem of a preferred stock dividend does not present itself.

In a sense the peculiar difficulties of both the manufacturing and the public service businesses are combined in the railroad. Like the manufacturing business, it is affected by fluctuations in general business conditions and must therefore conserve its surplus in good years to protect it against possible losses in bad years. Like the public utility, it must be prepared to make large and costly extensions and improvements to meet the requirements of the public and must not finance these through bank loans. Circumstances require, therefore, that the new road should conserve its earnings to meet these capital costs, unless it is absolutely assured of being able to obtain money easily and economically from the sale of additional bonds. There is every reason, therefore, for directors of a railroad to hold back dividends from the common shareholders, even after the railroad can show several years of liberal earnings. Unless there develops some conspicuous reason for the declaration of dividends, such as the psychological effect in the community, none should be declared for a period of four or five years, and then not unless the road has secured for itself such a high credit as will insure the further sale of bonds. In other words, in spite of the semipublic character of railroads and the high esteem in which they, as a class, have been held among investors,[2] the initial dividend on the common stock should be postponed even longer than in the case of the manufacturing company without bonds or the local public utility with both bonds and preferred stock.

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[2] This was certainly true down to 1913. But since the period of the Great War, and especially during the period of government administration, railroads lost much of their old-time standing among investors. Now that they have passed back into private control, the future of their credit is even more problematical.

Our fourth illustration is that of a bank with only one class of stock. This stock has probably been paid for at its full par value in money. But here, more than in the case of any of the other businesses cited, the general credit of the bank in the community is of first consideration. The bank's good-will is very much enhanced if it shows a considerable surplus, especially when this is fully earned. To this end no bank should pay out earnings in dividends until it has accumulated such a surplus. The amount needed will vary according to the financial conservatism of the community which the bank serves and the general commercial integrity of the men who are responsible for the policy of the bank. The earnings derived from the use of this surplus will accumulate to the benefit of the stockholders so that no permanent sacrifice will be required of them as a result of their loss of dividends.

In all these cases the presumption has been that a part of the common stock is held by the directors and part by the public. If all the common stock is in the hands of small holders, who, whether they hold for investment or for speculation, are seemingly loyal to the company, the policy to be followed is somewhat different from that so far suggested. In this case small dividends should be begun sooner, in order to strengthen the investment position of the stock, but especial care must be taken that a rate be not established which cannot be maintained. On the other hand, when the common stock is held entirely by the management there is no need of exerting a special effort to preserve its investment character, except that a dividend once begun should be maintained in order to preserve and strengthen the general credit position of the company.

In closing this discussion no more comprehensive summary of sound dividend policy can be found in the whole annals of American financial history than a certain resolution of the Board of Directors of the Union Pacific Railroad. An entirely new and very able management acquired control of the road at the time of its reorganization in 1897. During the succeeding two years large sums of money were expended in betterments. Control of connecting roads was acquired at low prices and through able management enormous equities were built up for the benefit of the Union Pacific Railroad. And the gross and the net earnings had increased by leaps and bounds so that the general credit of the road was becoming firmly established, notwithstanding its previous unfortunate history. Yet the directors, on the crest of this initial prosperity, refused to pay the full dividend on the preferred stock and passed a resolution which began as follows: "Whereas the company has been in possession of all its main lines barely a year, and of its branch lines a less time, and is therefore without a basis of experience for determining any fair average of results for unequal years, and it is not deemed advisable to add to the bonded debt, but to continue a liberal application of surplus income to permanent improvements and additions and to such uses as will secure economy of operation and increased earning power, and thereby establish stable and permanent values for its securities and a reasonably safe minimum basis of regular dividends to its stock. . . ." This is sound finance. And the marvelous success of the Union Pacific Railroad during the following decade is the strongest kind of empirical proof of the wisdom contained in this resolution.

CHAPTER VIII

TREATMENT OF SINKING FUND RESERVES

Reasons for the existence of a sinking fund, 125; Occurrence of sinking fund, 126; Methods of operating the sinking fund, 130; Fixed reserves, 131; Varying, clearly defined reserves, 132; Reserves depending on the fluctuations of business, 133; Optional sinking funds, 136; Investment of sinking funds, 137; Serial bonds, 141; The sinking fund and permanent debt, 143

The sinking fund for bonds is a part of the stockholders' net earnings, temporarily set aside. It is the most important of the various special reserves segregated from the general surplus. By means of it a part of the funded debt liability is extinguished directly out of earnings. From the point of view of the corporation its value lies almost entirely in the increased attractiveness and therefore higher market price which its presence gives to corporate funded obligations.[1] This is true not only for the whole issue when first sold to bankers, but also for individual bonds throughout the life of the issue. The regular and imperative demand of the sinking fund trustees always affords a market for at least some of the bonds.

Aside from this advantage the basis of the sinking fund in corporation finance rests entirely on the character of the security behind the bond. If it may reasonably be presumed that the property covered by the debt will be as valuable when the bonds are due as when they are issued, there is no need for a sinking fund, as the corporation will be able to refund them without serious difficulty. If, on the other hand, there is little specific property behind the bonds, it is necessary to create a reserve during the time they are outstanding, so that money for their payment may be available in case the general credit of the corporation is not strong enough to insure their reissue. Similarly in cases where the property behind the bonds is gradually used up by the operation of the business, as with timber or coal, the bonds must carry a sinking fund to protect the principal of the loan.[2]

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[1] The increase in market price of corporation bonds by reason of the presence of a sinking fund is one of the most interesting aspects of corporation finance, because its causes are essentially psychological. They are remnants of a point of view which regarded corporation finance as grounded on the same principles as private finance—remnants of the original sharp divergence between the position of owner and that of creditor. The stockholder recognizes the permanence of his investment but the bondholder clings to the fiction that his security must be redeemed in money by the corporation at a certain definite time. He assumes that the bonded lien on the corporation's assets is but temporary and that the stockholders look forward to the time when the corporation shall be free from debt. For further discussion on this point see the closing paragraphs of the present chapter.

Until 1893 the sinking fund provision was common among railroad bond issues.[3] It gave considerable trouble, however, as a trustee of a bond issue would not force the payment of the instalments if such a course was likely to result in a receivership. In that event the bonds which he was seeking to protect would be injured to a vastly greater degree, as experience had shown that the publicity of a railroad's financial disaster hurts the value of every one of its bond issues, even the most secure. The trustee, therefore, merely brought pressure to bear on the railroad corporation to meet the sinking fund obligation, but if the management remained obdurate nothing was accomplished. So that in practice, at the critical moment when the sinking fund was intended to be of most use in protecting the bonds, it proved to be completely ineffective.

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[2] It should be added also, that if the sinking fund provisions make it obligatory for the corporation to buy the bonds in the open market, the general salability of the bonds during their life will be increased somewhat. This is especially true of small issues but little known and possessing, as a natural consequence, a narrow market.

[3] There were, of course, exceptions, and the issue of the Lehigh Valley Consolidated Mortgage 4½ per cent and 6 per cent Annuities of 1873 showed a willingness of one railroad corporation at least to create perpetual debt.

Furthermore, the railroads had attained, at the close of the century such an important place in the economic development of the country that their semipublic character was recognized on all sides. In spite of adverse legislation, which tended to reduce any extraordinary profits which they might secure, there had been handed down many decisions by state and federal courts which protected them in earning at least a fair rate on their investment.[4] As the bonded debt was reduced, through successive reorganizations, to an amount well within the replacement cost, the investors recognized that the courts would protect the railroad, under all ordinary circumstances, in the payment of the underlying bonds. Beginning about 1894 these bonds were therefore made of late maturity, and were not provided with sinking fund provisions. They were, in effect, irredeemable debts. During each successive year, through the reinvestment of earnings and the proceeds of the sales of overlying securities in the physical property of the roads, the security of these long-term bonds has been strengthened much more than any sinking fund could have strengthened it. In other words, the market value for the funded obligations of railroads no longer needed an artificial stimulus.

Since 1893 most of the old underlying sinking fund railroad bonds have either been paid off or else refunded into the large permanent general mortgage issues. It was found, as a result of a special investigation, [5] that of a random selection of 244 railroad bond issues, 36 only, or less than 15 per cent, were protected by sinking fund provisions. This represents a lower percentage than that of any other class of corporation bonds.[6]

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[4] There have been numerous exhaustive studies of the growth of the doctrine of judicial review of the reasonableness of railway rates. See especially Adam, A. D., 7 Pub. Am. Econ. Assn. 3d Series 24 (1906), and Smalley, H. S., Ibid. 83. Also the illuminating article entitled "The Regulation of Railway Rates under the Fourteenth Amendment," Swayze, F. J., 26 Q. J. E., 389 (1912). These three articles are reproduced in Ripley, W. Z., Railway Problems (1913). In the important cases down to 1885 (16 Wall. 36; 94 U. S. 113; 108 U. S. 526; 110 U. S. 347) the Supreme Court was inclined to hand the railroads over to the tender mercies of the state legislatures, but in a series of important cases immediately following the Supreme Court has sought to protect them in earning a fair rate of return on invested capital. See 116 U. S. 307; 134 U. S. 418; 156 U. S. 649; 164 U. S. 578; 169 U. S. 466; 174 U. S. 739; 183 U. S. 79. These citations cover important cases down to 1902.

[5] C. M. Kielland, a student in Yale University, made an exhaustive study, under the author's direction, of 1814 different bond issues for the purpose of tabulating the different kinds of sinking funds and their methods of operation. Many of the

The practice of issuing bonds with a sinking fund requirement is much commoner outside railroad issues. Investors have not been ready to concede to other forms of private enterprise the public character of railroads, so they have required the presence of the sinking fund provision to make more certain the refunding or the redemption of the bonds at maturity. This is especially true in the case of industrials, presumably because of the instability of the earning capacity of the property behind the bonds.[7] Among public utility companies, about half of their bond issues now contain provisions for sinking funds.[8] The frequency of sinking funds in these issues is due more to the competition for the favor of investors than to any other reason. No type of enterprise has called more continuously and for larger amounts of capital since 1907 than the public service corporation. It is natural, therefore, that every effort should be made to define a form of security that would appeal strongly to the bond buyer. The addition of a sinking fund provision undoubtedly strengthens the apparent security in the mind of the ordinary investor, and thus increases the marketability of public service issues under conditions of strong competition.

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statistical computations in this chapter are taken from his unpublished thesis. The results in concrete form were as follows:

All Outstanding	Number of Bond Issues Examined, June, 1914	Number with Sinking Fund Provisions	Percentage with Sinking Fund Provisions
Railroads	244	36	14.7
Public Utilities	991	419	42.3
Industrials	517	294	56.9
Mines	62	44	68.8
Total	1814	793	43.7

[6] See preceding note.

[7] See note 5.

[8] Of 991 bond issues of public service corporations with a capital in excess of $1,000,000—419, or 42 per cent, had sinking fund provisions. See note 5.

The sinking fund provision is necessarily and invariably used to protect bond issues of private enterprises where the property behind the bonds is of short life, or rapidly decreases in value. The first case is illustrated by the equipment of railroads and the other by the ore bodies of mines. As explained at length at another point,[9] practically every equipment obligation[10] is issued in a serial form or else protected by a very large sinking fund. Bonds are issued infrequently by mining corporations and practically every one of these few issues is protected by a sinking fund requiring that the bonds be redeemed as the mineral assets of the company are dug out.[11]

Of anomalous character, but closely connected with the use of the sinking fund provision in bond indentures, is the requirement sometimes inserted in the preferred stock contract that reserves shall be set aside each year to be used for the purchase in the open market of preferred stock. This provision is inserted to render the stock more attractive to investors since the continual purchase by the company supplies an artificial demand for the preferred stock and tends to increase the equity belonging to the preferred stock that remains in the hands of the public. This sinking fund provision has been included only in the preferred stocks issued within recent years, so that the actual results of its operation are as yet not known. Yet the fact that it has been used most extensively in connection with preferred stocks of inferior quality which could not be sold except by the use of special and often surreptitious inducements does not augur well for its general adoption. At all events the contract by which a corporation agrees to purchase and retire its own stock represents one more step toward the obliteration of the fundamental distinction between the creditors and the owners of the corporation. Clearly the preferred stock, which a corporation obligates itself to buy at a definite future time and at a definite price is merely a funded obligation parading under another name. The specific provisions of these preferred stock sinking funds were discussed in Volume I, Chapter VI, dealing with preferred stocks as a whole. The subject is discussed again, with reference to a large group of recently issued industrial stocks in mind, in Volume IV, Chapter VIII, note 13.

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[9] Volume I, Chapter V.

[10] Except in a very few cases of equipment bonds issued by railroads of very strong credit, cases in which the equipment lien is only incidental to the general lien on other assets of the road.

[11] Keilland found that of 456 corporations engaged primarily in mining, 111, or 24 per cent had (1914) issues of bonds, and of these, 62, or 13 per cent only, were greater in amount than $500,000. Of these 62 issues, 44, or 69 per cent, had sinking funds. Had he omitted from consideration certain bond issues partially secured by valuable manufacturing properties and others of iron mines indorsed by a corporation of high independent credit, the proportion of sinking fund issues would have been over 90 per cent. See note 5.

The fundamental purpose of the sinking fund is to reduce the ratio between the amount of the debt and the value of property by which it is secured. The margin above the bonds, the equity, is increased. Different provisions apply to the operation of different sinking funds but this end is the primary one in all cases. The variations concern either the rates of payment into the sinking fund reserve or the manner in which the reserve shall be invested. These variations, some of which are of considerable significance, are almost innumerable.

The following table illustrates some of the more familiar methods of fixing the amount of sinking fund reserve to be set aside annually:

1. Fixed regular instalments—applying more commonly to closed issues of bonds:
   (a) Fixed amounts of money.
   (b) Fixed par value of bonds.
2. Varying but clearly defined proportional instalments not determined by the results of the business—applying more commonly to open issues of bonds:

  - (a) Instalment a proportion of the outstanding bonds. This is the commonest provision.
  - (b) Instalment a proportion of total capitalization or entire debt.
3. Varying instalments determined by the results of the business:
  - (a) Instalments proportional to the gross earnings.
  - (b) Instalments proportional to the net earnings.
  - (c) Instalments proportional to the admitted surplus.
  - (d) Instalments proportional to the dividend payments.
4. Contingent payments:
  - (a) Optional payment determined by a maximum and a minimum.
  - (b) Entirely optional.

The first group of sinking fund provisions, included under the first division of the classification given above, represents those bond issues in which the corporation is required to set aside a definite fixed amount each year. Sometimes the corporation is required to invest annually a definite sum of money in bonds,[12] but rather more frequently, especially in railway issues, it is required to purchase a definite face value of the bonds, irrespective of market price.[13] This provision of a fixed and constant instalment applies chiefly to the old closed issues of bonds brought out before 1907.[14]

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[12] In the case of the American Hide and Leather Company 6 per cent of 1919, the company must appropriate $150,000 in money each year with which to buy its bonds. The amount of bonds acquired will of course vary with the market price.

[13] Thus the sinking fund provision of the Pennsylvania Railroad Consolidated 5 per cent Gold Bonds of 1919, requires bonds to the face value of $50,000, to be retired each year. The General Mortgage of 1959, of the Public Service Corporation of New Jersey, requires the payment into the sinking fund of $209,500 of the bonds each year.

[14] A detailed study of the conditions of payment of 309 different sinking funds,

The second group in the preceding classification represents those sinking funds which vary according to the amount of outstanding bonds. The instalment is ordinarily a definite percentage of the volume of bonds in the hands of the public, so that the larger the par value outstanding, the larger will be the total par value of bonds absorbed each year by the sinking fund. Clearly the method applies particularly to the so-called open-end mortgages, and as the majority of the current issues of bonds are of this character, it may be said to be the usual current form of sinking fund provision. It is used to increase the appearance of the safety of the loan.

There are a great variety of ways in which the instalments of the sinking fund for these bonds are specifically defined. The simplest is a constant percentage of the outstanding issue so that unless bonds are later issued under the mortgage the annual reserves will remain constant throughout the entire life of the bond. In other cases—and this provision is becoming more common among public utility issues—the percentage is made to increase as the date of maturity approaches, so that the rate of the enhancement of equity shall increase with the age of the bond. The specific amount of reserve may be a definite, increasing amount of money,[15] or a definite, increasing

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selected at random, shows the following results, tabulated by percentages. (Kielland, see note 5.)

	Railroads	Public Service	Industrial	Mining
Percentage of total sinking funds belonging to Group A	61%	36%	38%	44%
Percentage with definite money payment	22	26	27	38
Definite fixed par value of bonds	39	10	11	6

[15] As, for example, in the collateral trust bonds of the Railway and Light Securities Company. The so-called "First Series" were issued in 1905 and mature in 1936. The annual sinking fund requirements are:

1905—1910	
1911—1914	$10,000
1915—1919	15,000
1920—1924	20,000
1925—1935	27,000

The sinking fund provision of the Canadian Car and Foundry 6's of 1939 requires a reserve annually in cash of 2 per cent of the outstanding bonds to be invested in the bonds of the company, and this fund is increased by the interest on the previously redeemed bonds.

proportion of the outstanding bonds.[16] Owing to the general and perhaps well-grounded belief that large open-end bond issues do not properly protect the investor, the various public service operating companies have vied with each other in inventing new and complex sinking fund provisions for their holding company bonds which shall tend to allay the suspicions of investors. As a result, the variations and modifications of the "accelerating" sinking fund reserves are almost legion, one of the commonest being that of basing the sinking fund on the entire outstanding debt.[17] As this method of defining the sinking fund is of recent origin and has arisen in response to the competition for the sale of large junior and poorly secured public service issues, it is rarely found among bonds of other forms of enterprise.[18]

The third group in the preceding outline includes that class of sinking fund provisions in which payments vary with the condition of the business. They usually pertain either to

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[16] An example of this is the sinking fund provision in the collateral trust—called erroneously. First Mortgage—5 per cent, 1942, bonds of the Federal Light and Traction Company. The bonds are issued under an open-end indenture which provides for annual sinking fund payments as follows:

1913—1923	1½% of the outstanding bonds
1924—1933	2% of the outstanding bonds
1934—1942	2½% of the outstanding bonds

[17] Frequently the sinking fund provision of the large open and refunding issue requires that the amount to be set aside shall be based on the total bonds outstanding including the underlying issues. Thus the sinking fund requirements for the Dayton Power and Light Company Refunding 5's of 1941 permit the percentage to be computed on "all bonds of this issue outstanding and all underlying bonds and bonds of corporations 51 per cent of whose stock is owned." The percentage in this case, as in that of most large open-end mortgages, increases as the bonds approach maturity:

1917—1924	1%
1925—1932	1½%
1933—1940	2%

But in computing the annual sinking fund instalments for this issue, the sinking fund for any of the underlying issues may be deducted.

[18] Thus of 311 bonds having sinking fund provisions, only 3 per cent of the industrials belonged to this group, none of the mining and none of the railroad bonds. In contrast 39 per cent of the public service sinking funds were of this type. The list included all forms of public service bond issues. (Kielland, see note 5.) The writer is of the opinion that fully 80 per cent of the holding company and large junior public utility issues—especialy those sold since 1911—are provided with this form of sinking fund.

businesses susceptible to marked fluctuations in revenue and earnings, or else to businesses involving the gradual consumption or wastage of the capital assets. With but few exceptions, the rate of payment into the sinking fund depends upon one of four variables—the gross volume of business, the net earnings, the admitted surplus, or the dividend payments. Of these the first is the commonest.

Among certain classes of bonds the provision that the sinking fund payments shall vary with the total volume of business is very common. Most mining bonds have sinking fund provisions requiring the payment to a trustee of a certain sum of money for each ton of mineral removed from the ground. The customary amounts are 10 cents a dry ton of copper ore treated,[19] 5 cents a ton for coal mined,[20] and 2 cents a barrel for oil delivered at the storage tanks.[21] Other mineral deposits used as security for bond issues are less susceptible to uniform methods of amortization.[22]

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[19] Chino Copper Company 6's, 1921, require a payment of 10 cents per dry ton of copper ore treated during the preceding calendar year. Frequently the rate increases as the bonds approach maturity—as in the sinking fund of the Ray Consolidated Copper Company 5's, 1921, in which the rate is 10 cents per dry ton until 1917, and thereafter 20 cents per dry ton. A similar provision is found in the sinking fund of the Inspiration Consolidated Copper Company 6's of 1922.

[20] Vandalia Coal Company 6's, 1930, require a payment of 5 cents per ton of coal mined and shipped. This amount is by no means uniform. Out of some twenty sinking fund provisions of coal bonds, about half were found to have the 5 cents provision and about half had various other rates. For example, the Cambria Fuel Company 6's, 1925, had a sinking fund provision requiring the payment of 15 cents per short ton mined and shipped, whereas the Consolidation Coal Company 4½'s of 1922 required the payment of only 1 cent. Next to 5 cents, the commonest rate of payment for coal bonds is 3 cents. As in other cases, the rate may vary from year to year; the Consolidation Coal Company 5's of 1950 require the payment of 2 cents per gross ton run-of-the-mine for the first five years, 3 cents for the next fifteen years, 4 cents for the next ten years and thereafter 5 cents until the maturity of the bonds. Frequently there is a minimum limit as in the sinking fund provision of the Pittsburgh Buffalo Company which requires a payment of at least $100,000 a year whether or not any coal is mined, or a maximum limit, as in the New River Company 6's of 1934, the sinking fund of which requires that 3 cents a ton must be set aside but that the total sinking fund reserve shall not exceed 3 per cent of the outstanding bonds in any one year.

[21] Mexican Petroleum Company, Ltd. of Delaware 6's, 1921, require a payment of 2 cents per barrel of oil delivered by subsidiaries. The Indian Refining Company 6's of 1921 require a sinking fund of 60 per cent of the value of all oil produced. It is very bad financial policy to issue bonds on oil properties and comparatively few important issues are to be found. A dry oil well affords no more security for bonds than an abandoned mine. If the wells are numerous and widely distributed over different fields there may be a substantial security, but under all circumstances the bond issue should be comparatively small and of early maturity. A sinking fund alone, based on the oil flow, will not give sufficient security, for the very simple reason that the oil may sometime cease to flow.

[22] For illustration, International Agricultural Corporation 5's of 1932 require 20 cents a ton of phosphate rock mined.

This type of sinking fund is also very common in bond issues covering various forms of assets that are gradually sold, such as timber and land. While the ordinary timber bonds are serial in form and, like the railroad equipment issues, mature without respect to the volume of business of the issuing corporation, large lumbering companies have issued some long-time bonds with specific sinking fund provisions. These involve the payment to the trustee of a small stumpage reserve for all the timber cut.[23] In the case of land companies, the sinking fund provision usually requires the redemption or purchase of bonds in proportion to the sales of land.[24] In a very few other cases this form of sinking fund requirement is used by corporations the assets of which neither depreciate rapidly, nor become exhausted.[25] But this method of paying into the sinking fund a fixed proportion of gross earnings, although it certainly is quite the simplest device for securing a correspondence between the sinking fund payments and the fluctuations of the business, is practically never found in corporations with the ordinary type of assets.[26]

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[23] For example, C. A. Smith Timber Company 6's, 1927, require the reserve of $3 per thousand of pine cut, $2 per thousand for redwood, $1.50 for other kinds of lumber. The St. Lawrence Pulp and Lumber Company 6's, 1932, require a reserve of $3 per thousand for all forms of lumber cut and $1 per cord for pulp wood. The Central Leather Company, a large and valuable part of whose property is timber lands has no "sinking fund" so called to protect its First Mortgage 5 per cent Bonds of 1925, but the company is required to set aside a "depreciation fund," which is another phrase for the same idea. For more detailed discussion of means for protecting timber bonds see McGrath, T. S., Timber Bonds. A brief, illuminating discussion of the "Technique of Timber Bonds," *Boston Evening Transcript,* page 8, March 9, 1914.

[24] For example, the Lewiston Land and Water Company, Ltd. is obligated to set aside $150 for every acre sold, to be used to retire the bonds. In return the trustee releases the land sold from the mortgage securing the bonds. The sinking fund of the Bessemer Coal, Iron and Land Company 6's of 1931 requires a sinking fund reserve of 55 per cent of the selling price of all land sales.

[25] Thus the Electrical Development Company of Ontario, Ltd. First Mortgage 5 per cent Bonds contain a sinking fund provision that, commencing in 1911, $1 must be paid into the sinking fund annually, for each electrical horse-power sold and paid for during the preceding year. Such a requirement has little meaning unless supported by an additional clause that makes imperative the setting aside of some definite minimum each year. Such is the provision in the somewhat complicated sinking fund requirements of the Niagara, Lockport and Ontario Power Company's First Mortgage 5's of 1954. "Sinking fund for purchase of bonds at not exceeding 120 and interest began November 1, 1909, and will receive at least 13 cents per 1,000 kw.-hrs. of electric power transmitted during preceding 12 months ending August 1 of each year, at least equal to 4½ per cent of gross earnings and at least $25,000 yearly to and including 1919; thereafter not less than $35,000 yearly to and including 1929; thereafter not less than $50,000 yearly."

[26] Thus the sinking fund of the Commonwealth Water and Light Company 5's,

It is not usual to make the sinking fund payments depend either on the net earnings[27] or the surplus.[28] Although such criteria of the company's success are more reliable than the mere volume of business, they are more susceptible to dispute between the trustee and the corporation; and that method of determining the absolute amount of the sinking fund payments is best which is clearest and least susceptible of misunderstanding. A sounder plan is that of fixing the fund in accordance with the dividend payments. The presumption is that the rate of dividends is an index of the net earnings, but if the management prefers to keep the money in the business the equity behind the bonds is strengthened quite as much or more than if some of the bonds were canceled.[29] In very rare cases the sinking fund payments depend both on the net earnings and the dividend disbursements—a combination of this and the preceding plan.[30]

The fourth group of sinking fund provisions, represents what might be called "optional sinking funds." In such cases the corporation may make the sinking fund payments at its pleasure.[31] As it usually suits the convenience of the company

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1934, requires 10 per cent of the gross earnings and the proceeds of all property sold. This percentage is also required as the sinking fund on the First Mortgage 5 per cent Bonds of the North Shore Gas Company.

[27] The mortgage of the York Haven Water and Power Company Consolidated 5 per cent Bonds involves no sinking fund from 1907 to 1927, but from 1927 to 1957 it is provided that a sinking fund of 10 per cent of the net earnings shall be set aside. A similar method is used to determine the amount of the improvement fund in the Kansas Gas and Electric Company First Mortgage Bonds. See note 42.

[28] In a few cases the sinking fund can be drawn only from the surplus earnings, the inference being that the accumulated profits of previous years may be used for the sinking fund payments. Thus the sinking fund of the American Brake Shoe and Foundry Company's First Mortgage 5's of 1952 requires the payment of $20,000 a year from the surplus earnings.

[29] The sinking fund provision of the Cuban American Sugar Company 6's of 1918 required the payment to the trustee of 25 per cent of the annual dividend disbursements during the life of the bonds. The American Malting Company 6's of 1914 required the reservation for the sinking fund of 50 per cent of any dividend paid on the preferred stock.

[30] Thus in the case of the First Mortgage Bonds of the Nevada-California Power Company, 20 per cent of the net earnings must be appropriated for the purchase and cancellation of the bonds and in addition an amount equal to any dividends on the stock in excess of 6 per cent must be set aside for the same purpose.

[31] Such cases are rare. The bonds of the subsidiary companies forming the Cuban American Sugar Company are perhaps the most notable examples.

to make sinking fund provisions when the earnings are large—at a time when additional security for the bonds is unnecessary—and does not suit its convenience when the earnings are small, the provision of optional payments adds but little to the security of the bonds. If, however, this optional provision takes the form of the so-called maximum and minimum payments, the sinking fund may add somewhat to the security. In such cases the annual reserves are optional between two limits but the payment of at least the minimum amount is obligatory.[32] Sometimes the sinking fund provisions are a complex combination of several different requirements, but such cases are of interest only as abnormal variations from standard types and have little excuse in sound financial policy.[33]

In addition to the provision as to the amount of the payments, the whole question of the sinking funds has another important aspect: What shall be done with the reserves? Ordinarily the administration of the sinking fund is left to the control of the corporation, except in the case of railroad bond sinking funds where the administration by a trustee is more common.[34] The most important question is, however, into what forms of securities shall the reserves be turned. Two methods are ordinarily available. In one, the sinking fund reserve is invested in the issue of bonds which are to be protected by the reserves; in the other, it is placed in some other form of property, either different bonds or else improvements in the physical property of the corporation.

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[32] Thus in the American Sewer Pipe Company 6's of 1920 the minimum sinking fund payment must be $50,000 and the maximum $100,000. Between these limits the payment rests on the discretion of the company.

[33] An excellent example of such a complex sinking fund is that of the Pillsbury-Washburn Company 5's of 1928. It requires annually: (1) $30,000 after interest on bond issues; (2) $30,000 contingent from surplus profits over and above a certain rental of $100,000; (3) all surplus profits from "investments"; (4) one-half profit on certain securities; (5) one-half sums recovered by restitution proceedings.

[34] It was found that only approximately 25 per cent of the sinking funds of public service and industrial bonds were administered by a trustee, whereas 70 per cent of the railroad sinking funds were so administered.

The usual requirement for the investment of sinking fund reserves is that the bonds of the same issue be bought on the open market and canceled.[35] Sometimes the bonds are not canceled but are held by the trustees and interest collected upon them, the proceeds of which are used for additional bond purchases.[36] It is usually provided that the bonds to be acquired for the sinking fund may be purchased in the open market at the price specified in the bond as the call price, and further that if they are not procurable at the fixed price or lower, they may be called by lot.[37] It is important that the corporation or trustee be empowered to call the bonds or otherwise the holders may exact a high price, especially if the bonds are closely held.[38] And further it is important that the bonds be callable by lot, for otherwise certain holders may be discriminated against if the call price becomes less than the market price.

The other method of investing the sinking fund reserve is to place it in securities of other companies or improvements in the property of the corporation.[39] It is now somewhat unusual to allow the corporation or the trustee to invest sinking fund reserves in the securities of other corporations and such a policy is not easily defended. The purpose of the reserve is to increase the equity behind the outstanding bonds, and although the accumulation of an investment fund belonging to the bondholders may achieve this result, it is accomplishing the end indirectly. At all events it requires that great care be taken in selecting the investment securities into which the reserves shall be placed, in order that the integrity of the fund shall be at all times intact.[40] Bonds bearing a low rate of interest are usually chosen. In fact the rate is lower, probably, than that of the bonds for which the reserve is kept. This gives at least the appearance of unquestioned security for the sinking fund. As a result the corporation will receive less interest on the reserves than it pays out on the bonds the reserves are maintained to protect. Clearly this is not wise management of the sinking fund.

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[35] For statistics see note 43.

[36] The expression used for this provision is "the bonds are kept alive in the sinking fund." It was found that of the bonds purchased for a sinking fund, in the case of railroads 17 per cent, public utilities 26 per cent, and industrials 11 per cent were kept alive. See notes 5 and 43.

The interest on the sinking fund bonds may constitute, in extreme cases, a larger fund than the actual sinking fund reserve itself.

[37] See note 43.

[38] Sometimes when the bonds are not callable or callable only at an excessive premium, the sinking fund contract permits the purchase of other securities. Thus if the American Hide and Leather Company 6's, 1919, cannot be bought for the sinking fund at 115 or less, the trustee may acquire other securities for the sinking fund. Similarly it is provided in the sinking fund clause of the Auburn Gas Company that $5,000 be set aside for the purchase of the bonds at a price to yield at least 3½ per cent on the investment. Otherwise the sinking fund reserves shall be placed in other approved securities.

[39] Midway between this and the preceding form, in which bonds are bought and canceled for a single sinking fund, is the provision that permits—sometimes requires—the purchase of other bonds of the same or an allied corporation. Thus the sinking fund provisions of the general mortgage bonds of the California Gas and Electric Corporation requires the use of the sinking fund payments first for the acquisition of the four small issues of subsidiary bonds. This is a method of strengthening refunding issues which is excellent, but not now common.

When the sinking fund reserve is not invested in other bonds and securities the corporation may sometimes use it to construct new property,[41] or for improvements covered by the original mortgage. By increasing the value of the property beyond its normal depreciation the security of the outstanding bonds is correspondingly increased. Moreover, it is often possible for the management to make improvements in the mortgaged property so that the earning capacity of the corporation can be kept abreast of the advances in technical construction. In this way the equity of tangible property itself is increased and the equity of earning capacity as well. This use of the sinking fund reserves has only recently come into prominence, and is now almost without exception restricted to the sinking funds of large public service open-end mortgage bond issues.[42] The only objection to it is the possibility of flagrant abuse. There is a constant temptation for the management to confuse normal repairs and replacements, which should be offset by proper repair charges and depreciation reserves taken directly out of earnings, with improvements which may properly be paid for from the sinking fund reserves. This is conspicuously true of what may be called the "reserve for obsolescence." As was pointed out in a preceding chapter, a certain amount of the gross earnings should always be set aside to create a fund from which to buy new and improved equipment in order to maintain at least such efficiency as will keep the corporation abreast of its competitors. The cost of such improvements is a proper charge against earnings because they are necessary to maintain the full earning capacity of the corporate property. They are not additions to property in the sense of representing an increase of capital. Yet they are improvements within the strict common sense meaning of the term. Because of this confusion the management may consider these improvements within the provisions of the sinking fund requirement, and pay for them from the sinking fund reserves rather than from earnings or special obsolescence reserves created out of earnings. With this temptation ever present, it is inexpedient to permit the management to control the administration of the sinking fund. The interests of the management and the bondholders are frequently so divergent that there must be explicit and unequivocal definition of the rights of each, and for this the subtleties of accounting are too vague. Consequently the method of investing the sinking fund in the very bonds they are supposed to protect is to be preferred over the investment in property improvements.[43]

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[40] In support of his construction that sinking funds, instead of serial payments, are bad for all bonds, Chamberlain cites the notorious case of the sinking fund for the retirement of the state of Mississippi's "Planter's Bank" bonds. In 1830 a sinking fund of $250,000 was started. By 1839 it had increased to $800,000, but within the next ten years it had dwindled to $100,000 through mismanagement, dishonesty, and the normal hazards of investment. See Chamberlain, L., Principles of Bond Investment, 152, (1911). He cites a study in the *Bankers' Magazine*, 1863, entitled "Banking and Repudiation in Mississippi."

[41] As in the Colorado Fuel and Iron 5's, 1943, which require that 2 cents for each ton of coal and 5 cents for each ton of iron ore mined must be set aside. This reserve may be used either to acquire new coal or iron ore properties or else paid to the trustee for the redemption of the bonds.

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[42] An excellent example in a somewhat complicated form of the "improvement sinking fund" is provided by the mortgage contract given by the Kansas Gas and Electric Company to secure its First Mortgage Bonds, due 1922. On March 1, 1913, 1914, 1915, there was payable to a trustee in money an amount equal to 1 per cent of the outstanding bonds, from 1916 to 1918, 2 per cent, and from 1919 to 1921, 3 per cent. Should, however, the net earnings of the constituent companies equal or exceed three times the interest charges on all the outstanding bonds, during 1918 to 1921, then the annual cash improvement fund would remain at 2 per cent of the outstanding bonds instead of at 3 per cent. This cash improvement fund with the interest and other accumulations is to be held by the trustee and invested in betterments to the mortgaged property. By resolution of the Board of Directors, however, a portion of the improvement fund may be used for the redemption of the bonds.

Closely allied with the method of preparing to redeem bonds during their life by means of a sinking fund is the method of actually redeeming them through the serial maturity of a part or the whole of the issue. This plan, by which a certain series of the bonds of an issue automatically matures each year, has been adopted universally for equipment obligations[44] and to a very large extent for timber bonds,[45] although it is much less frequently found among corporations[46] than among municipal bond issues. It occurs, however, with perhaps increasing frequency as its advantages are fully realized. These advantages, from the point of view of the corporation consist of the gradual cancellation of a part or the whole of the issue during its life, without the payment of a redemption premium, and a wide market for its bonds among both banks which buy short-term bonds and investors who buy medium- and long-term bonds. The advantage to the investor

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[43] The various methods of providing for the investment of sinking funds, were found by Kielland to be apportioned as follows:

	Railroads	Public Utilities	Industrials
Require the purchase of bonds of same issue....	72%	68%	80%
Permit bonds of different issues of same corporation	9	5	1
Permit outside securities......................	9	6	4
Permit investment in improvements to property	10	21	2
Not explicit	..	..	13

See also note 5.

[44] For details see Volume I, Chapter V.

[45] For illustration, a large issue of $6,250,000 "timber certificates" was issued by the Kirby Lumber Company to cover the purchase from the Houston Oil Company, of over $20,000,000 of timber property occupying 790,000 acres. The transaction involved the initial payment or redemption of $415,000 certificates. The remaining $5,835,000 were to be gradually paid by the annual retirement of amounts varying from $100,000 to $725,000. It was intended to extinguish the entire issue in 1923.

[46] Besides equipment and timber issues, serial issues are used by manufacturing companies for their real estate mortgages, especially purchase money mortgages. For example, the Fore River Shipbuilding Company, a subsidiary of the Bethlehem Steel Corporation, issued in 1913 first mortgage bonds to the amount $750,000 of which approximately $39,000 mature serially each year until the entire issue is extinguished.

of the instalment bonds is the assurance that a part of the same will be paid off before maturity without the complication and frequently uncertain[illegible] administration of the sinking fund. Also, owing to the wide variety of maturing dates, the investor has the privilege of selecting the time at which his bonds fall due. Another device, very uncommon but effectual, is that the corporation pay a certain sum each year toward the principal of each bond. In this way, each bondholder is paid a part of his claim before it is due, while the security behind the bonds remains the same.[illegible]

It will be noted that the line of separation between certain forms of sinking funds and serial redemptions is by no means clear. Thus if the sinking fund requires a certain large percentage of the outstanding bonds to be called and canceled each year, so that practically the entire issue is extinguished before maturity, there is little substantial difference between this and the serial maturity of specified bonds.[illegible] The dis-

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[illegible] A trustee will not insist on the sinking fund payment if its enforcement would jeopardize the solvency of the corporation. If, on the other hand, a portion of the bond issue falls due definitely each year, neither the corporation nor the trustee can avoid payment without precipitating a receivership. A very wholesome suggestion for preventing confusion has been made by a practicing accountant:

"As a believer in publicity and in full information being given to the public as to the financial conditions and requirements of all companies, as well as their operating results, I am in favor of appending to the income statement of any company under obligation to make periodical payments to a sinking fund, the amount of such requirements during the period covered by the income statement, in order that those interested may have a means of knowing, in a general way, what the fixed requirements of the company are as compared with its operating resources for meeting such requirements." Ludlam, C. S., "The Treatment of Sinking Funds," 17 *Jour. of Acc.*, 175 (March, 1914).

[illegible] The New York Glucose Company, now a subsidiary of the Corn Products Refining Company originally created, in 1901, an issue of $2,500,000 in order to build and pay for its plant. Attached to each bond was a warrant calling for the payment of 4 per cent of the principal amount of the bond on September 1 of each year, beginning in 1902. The bonds matured ostensibly in 1920, but at the maturity only 4 per cent remained unpaid.

[illegible] A good illustration of such a sinking fund, which amounts to all intents and purposes—barring corporate fraud—to the serial redemption of the bonds, is afforded by the sinking fund provision of the "Thirteenth Series" Collateral Trust 5 per cent Bonds of the Electrical Securities Corporation. This is a subsidiary of the General Electric Company (Volume IV, Chapter VI). The bonds, dated 1913, due 1943, amount in all to $500,000, par value and are issued under the provision that there be drawn annually by lot, the following:

$10,000 par value, or 2% between 1918 and 1922.
$15,000 par value, or 3% between 1923 and 1927.
$20,000 par value, or 4% between 1928 and 1932.
$25,000 par value, or 5% between 1933 and 1942.
$25,000 par value, or the remainder in 1943.

Through such retirement, $475,000, or 95 per cent, of the issue will be paid before the maturity of the bond issue. See also Volume I, Chapter III, note 55.

tinction then becomes merely one of the administration of the serial payments.

In the case of civil loans, the serial method of amortization is gradually superseding the use of sinking funds. From every point of view the civil serial loans are to be preferred over loans protected by a sinking fund.[50] They are cheaper for the state or municipality, because they do not involve loss of interest on the securities carried in the sinking fund;[51] they are sounder for the investor and the municipality alike because there is no opportunity for the secret manipulation of the sinking fund,[52] and no complex problems of accounting arise.[53]

Connected with the practical problem of the accumulation of a special reserve fund during the life of the bonds, is the deeper and more economically significant problem of whether or not it is sound financial policy to attempt to prepare for the payment of bonds before they are due.

This problem arises from a changing attitude on the part of corporation directors toward debt. There was a period in our industrial development when corporate debt was regarded as a transitory liability to be subsequently erased. The early railroads were built with stock subscriptions and were bonded only as a last expedient when money could be obtained in no other way. In many instances their directors stated explicitly that the debt was placed on the road only as an emergency measure, and as soon as the line was completed the bonds would be paid. In accordance with this theory, most of the early railroad mortgage bonds were issued with sinking fund provisions, so that a portion of each year's earnings would be devoted to the task of bringing the road out of debt. This view is now obsolete. Except among New England financiers, accustomed to the traditions of local manufacturing and lighting companies, the financial world has overcome its distrust of permanent debt. There is, subconsciously at least, the firm conviction that when one issue of bonds matures another one will be issued and sold to take its place. In other words, corporation directors now regard the corporate debt as permanent. This point of view is based on the presupposition of the continued economic productivity of corporate property and on the implication that debt is based more on intangible credit than on physical property. The investor in corporation bonds, much as he may dislike the idea of permanent debt, does not care when his bonds mature so long as the corporation fully maintains the earning power of the property securing them. If this is done, the corporation managers consider themselves justified in assuming that there is no need of paying the corporate debt except when secured by assets which necessarily decline in value or amount. As stated in connection with the previous discussion of long-term and irredeemable bonds,[54] the policy of permanent debt is vicious, if based on the presumption of the indestructibility of physical property. Yet if based, confessedly, on the permanence and integrity of a corporation's credit structure, it has a good moral influence as giving a larger body of security holders an abiding interest in the permanent welfare of the corporation. It is, further, the tacit acknowledgment that the fundamental security of corporate obligations is the continued earning power of property rather than its original cost.

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[50] The growing disposition to use the serial method has been due largely to an able and influential monograph prepared by Alfred D. Chandler—"The Metropolitan Debts of Boston and Vicinity. Sinking Fund and Serial Bond Methods Compared." This monograph was printed by the town of Brookline, Mass., in 1905. All students of the methods of payment of civil, and even corporate loans, should familiarize themselves with this study. A brief discussion is found in Chamberlain, L., The Principle of Bond Investment (1911). *New York Times Annalist* (Mar. 27, 1911).

[51] Chandler prepared an elaborate study to prove this. Assuming that the municipal loan bears 4 per cent and that the sinking fund instalments can be invested at 4 per cent the saving of the serial bond plan amounts to approximately 4 per cent for the entire period of 20 years. In case the instalment can be invested at only 3 per cent, the saving is over 11 per cent. For bond issues of longer maturity the saving is proportionately greater. See previous note.

[52] This is very important in large state issues, where, very frequently, the sinking fund trustee merely acquires new bonds of the state so that the net debt is undiminished by the operation of the sinking fund. New York sinking funds have been manipulated in this manner.

[53] It often happens that there is a miscalculation, and the bonds fall due without adequate provision having been made for paying them. Several years ago, it was discovered that the sinking fund accounts of the smaller towns in Massachusetts were in confusion owing to the apparent incompetence of the town treasurers. The matter was taken in hand by the state. What was found to be true of the smaller Massachusetts towns is probably true in other localities where there is no supervision over town loans by someone familiar with the underlying principles for calculating sinking funds.

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[54] Volume I, Chapter II, page 30.

garded as a transitory liability to be subsequently erased. The early railroads were built with stock subscriptions and were bonded only as a last expedient when money could be obtained in no other way. In many instances their directors stated explicitly that the debt was placed on the road only as an emergency measure, and as soon as the line was completed the bonds would be paid. In accordance with this theory, most of the early railroad mortgage bonds were issued with sinking fund provisions, so that a portion of each year's earnings would be devoted to the task of bringing the road out of debt. This view is now obsolete. Except among New England financiers, accustomed to the traditions of local manufacturing and lighting companies, the financial world has overcome its distrust of permanent debt. There is, subconsciously at least, the firm conviction that when one issue of bonds matures another one will be issued and sold to take its place. In other words, corporation directors now regard the corporate debt as permanent. This point of view is based on the presupposition of the continued economic productivity of corporate property and on the implication that debt is based more on intangible credit than on physical property. The investor in corporation bonds, much as he may dislike the idea of permanent debt, does not care when his bonds mature so long as the corporation fully maintains the earning power of the property securing them. If this is done, the corporation managers consider themselves justified in assuming that there is no need of paying the corporate debt except when secured by assets which necessarily decline in value or amount. As stated in connection with the previous discussion of long-term and irredeemable bonds,[54] the policy of permanent debt is vicious, if based on the presumption of the indestructibility of physical property. Yet if based, confessedly, on the permanence and integrity of a corporation's credit structure, it has a good moral influence in giving [illegible] [illegible] [illegible] stock-holders an abiding interest in the [illegible] [illegible] [illegible] corporation. It is further the [illegible] [illegible] [illegible] [illegible] the fundamental security of [illegible] [illegible] [illegible] [illegible] earning power of property rather than in [illegible] [illegible]

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[54] Volume I, Chapter II, page 30.

CHAPTER IX

THE VOTING TRUST

Origin of the voting trust, 146; Purposes of the voting trust, 148; Chief use at time of reorganization, 150; Restrictions of trustees' powers, 152; Termination, 154; Legality and value, 155.

The voting trust[1] is an administrative device sometimes employed to maintain the executive or financial control of a corporation. By this device men owning little or none of the stock are able to control, absolutely, the policy of a corporation. It is essentially an administrative expedient for giving a publicly responsible management to a corporation, when —because of low intrinsic value or for other reasons—the real owners of the stock cannot be counted upon to take the trouble necessary to elect a board of directors which will work for the permanent welfare of the corporation.

The voting trust invariably rests, no matter what its origin, on the desire to separate the voting and controlling privileges of stock ownership from the other rights. The device is of quite recent origin, the earliest case of which the writer can find any specific record being that of the Pacific Mail Steamship Company in 1864.[2] A few voting trusts were established in connection with the railroad reorganizations following the panic of 1873,[3] but they came into general use only with the reorganizations of the middle nineties.[4] A voting trust is now, almost invariably, a part of every contemporary railroad and public utility reorganization and is present quite generally in industrial reorganizations. It is also widely used in connection with promotions, when the promoters part with a majority of the shares of the corporation and yet desire to insure their continued control of its management.

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[1] The most exhaustive and scholarly treatment of the voting trust is that of Cushing, H. A., Voting Trusts, A Chapter in Recent Corporate History (1915). Much of the illustrative material cited in this chapter has been derived from this study. Many original documents covering the formation, extension, and termination of voting trusts are reproduced as appendices. For other references, see 13 Yale Law. Jour.

[2] Litigation was involved. For details, see Brown v. Pac. Mail S.S., 5 Blatch. 527 (1867).

The earliest railroad voting trust at all analogous to its modern form, was that of the Atlantic and Great Western in 1868. The road, after numerous reorganizations, is now an integral part of the Erie system. For another reference to this unfortunate road, see Volume V, Chapter VI, note 10.

Because of the essential purpose of voting trusts in separating the voting from the other rights inherent in stock ownership, the courts in certain states,[5] have frowned upon them as contrary to the intent of stock ownership on the one hand and contrary to public policy on the other.[6] Although possibly these grounds of attack are technically justifiable, the advantages and often the necessity of the voting trust agreements have become so apparent that their legality must be admitted in the light of modern financial necessities. Indeed, the usefulness of the voting trust is so clearly recognized, that two states have enacted statutes permitting its existence.[7]

Voting trusts are created when the holders of a substantial part, usually at least a majority, of the stock of a corporation transfer their stock to certain trustees, receiving in exchange voting trust certificates. These entitle their holders to all the privileges of stock ownership, except that of voting. Any dividends or other emoluments which the voting trustees receive are immediately turned over to the holders of the certificates. In the intent, the stockholder surrenders all control over the corporation to his trustees, who are "entitled to exercise all rights of every name and nature, including the right to vote for every purpose and to consent to any corporate act." [8] In view of these large powers conferred on the voting trustees, their privileges are frequently circumscribed in the trust agreement,[9] although the real—in actual practice the only—safeguard of the stockholders is in the moral integrity of their trustees. It is, in the end, a means of centralizing responsibility and accountability.

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[3] For example, St. Louis, Iron Mountain and Southern, 1875; Pittsburgh and Lake Erie, 1877; Mobile and Ohio, 1879 (the certificates were called "special stock"—certificate reproduced, Cushing, H. A., Voting Trusts, 167 [1915]); Texas and Pacific, 1880. As in many other aspects of railroad financial history, the varied experiences of the Erie Railroad and its predecessors afford a most fertile field of illustration. Beginning in 1877 in the second reorganization of the main Erie system down to the last reorganization, and including the reorganizations of its various subsidiaries, the voting trust has been used in a variety of forms and has been the source of much litigation. See Daggett, S., Railroad Reorganization, Chap. II (1908) for references to sources.

[4] For statistical summaries, see Daggett, S., Railroad Reorganization, 382 (1908).

[5] Notably North Carolina and New Jersey.

[6] See Greenhood, E., Public Policy, 502; also Bache v. Cen. Leather Co., 78 N. J. Eq. 484 (1911).

[7] New York and Maryland. The statute of the [illegible]ced in full, Cushing, H. A., Voting Trusts, 118-119 (1915).

A voting trust is ordinarily created for one of three purposes. It may be created by law in order to carry out a judicial decree, requiring a definite action on the part of the stockholders. It may be created by a certain group of men who control a majority or more of the stock of a corporation to continue their own control or, what amounts to the same thing, to prevent the control from passing into unfriendly hands. And, thirdly, it may be created by stockholders of an embarrassed or reorganized corporation to insure for themselves a permanently responsible management which shall protect and conserve the interests of all. This is the commonest case. Stockholders of reorganized corporations generally delegate the management to a group of voting trustees chosen from or by the banking interests, or general reorganization committee. These are men who, in all probability, were the managers of the reorganization syndicate or were men who otherwise insured the consummation of the reorganization plan.

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[8] Quotation taken from the voting trust agreement of the General Motors Company. Reproduced, Cushing, H. A., Voting Trusts, 153 (1915).

[9] Four typical voting trust agreements are reproduced in Cushing, H. A., Voting Trusts, 136-160 (1915). The well-known voting trust agreement of the original International Harvester Company is reproduced in full in Gerstenberg, C. W., Materials of Corporation Finance, 91 (1915).

There is but one notable case of the first use, and that as recently as the autumn of 1914. Rather than endure a government dissolution suit, the directors of the New York, New Haven and Hartford Railroad permitted the United States District Court for the Southern District of New York to enter a "dissolution" decree involving the appointment of three sets of five voting trustees. One group assumed the voting control of the New Haven road's Connecticut traction lines, the second group that of the Rhode Island traction lines, and the third group the New Haven's interests in the Boston and Maine Railroad. These three groups of voting trustees held their positions as officers of the court, for the purpose of effecting a settlement of the New Haven system's entanglement. They might be called liquidating trustees as their power of control had, as its ultimate purpose, the sale of these various assets to interests independent of the New Haven road. The case might be passed over as exceptional and of little consequence, were it not for the fact that the trustees were appointed by a United States court, thus giving a judicial and federal sanction to the principle of voting trusteeship.

The second case is relatively common. A group of men possessing either actual or nominal control over a majority or all of the stock of a corporation wish to perpetuate their control without tying up the amount of money necessary to hold a majority of the shares. To accomplish this end they transfer to themselves or their associates a majority of the stock in trust, and the trustees then reissue to them voting trustees' certificates which are sold as the stock. It very often happens that there is outstanding at the same time a minority of actual stock, regularly transferable on the books of the company, and a majority interest of voting trustees' certificates which are transferable on the books of the voting trustees. Ordinarily, because both minority and majority are equally benefited or equally at the mercy of the voting trustees, the two types of securities are quoted at the same market value.

There are many reasons which may lead the holders of a majority of stock to tie up their control. The commonest is that of personal or business ambition or jealousy. The company is too large for certain men to hold in their own hands a majority of the stock, yet they deem it necessary to exercise a majority control. Such was the case of the voting trusts of the Bankers and Guaranty Trust companies of New York. Such have been the purposes of the voting trusts of the smaller local manufacturing companies when such have been created. The case of the banking voting trusts is peculiar because of the value of control for ulterior purposes—as, for example, the use of bank deposits for specific enterprises or for a refuge in case of financial distress. Again, the larger stockholders may be jealous of each other and unwilling to allow the control of the company to be in jeopardy, so that they establish a community of interests in which no one faction is dominant.[10] In a few cases voting trusts are created for the convenience of foreign security holders,[11] and again as a means by which a scattered majority may defend itself against a centralized and aggressive minority.[12] Such cases are, however, rare.

Distinctly the commonest and most reasonable use of the voting trust is that in connection with the reorganization of a bankrupt corporation.[13] At such a time the creditor interest represents a far greater actual investment in the corporate property than does that of the stockholders. The latter is merely the shadow of an equity of unsubstantial value. This stock is quoted at a low figure and is held largely by speculators and stockbrokers, who have little or no interest in the permanent welfare of the corporation. Yet, because of their voting power, these stockholders exercise an absolute control over the property. They can destroy the substantial value of the creditor interests without losing much themselves. A clever speculator can acquire control with little real investment and thus jeopardize not only the large interests of the bondholders but also impede or even seriously embarrass the recovery of the company.[14] To prevent this, the bondholders and the minority stockholders, or committees and representatives of these interests, arrange that the common stock and often the preferred as well shall be placed in a voting trust to be controlled by three or five men well and honorably known in the business world. As a result, all interests are protected by men whose responsibility for their trust is publicly acknowledged and who know that the success or failure of the new corporation will be laid by the general public directly upon them. Their reputations are at stake. As Cushing well expresses it, "The result of the normal voting trust has been to insure to a company both stability and continuity of policy, simple features which are often of substantial material advantage to the concern and to all its stockholders. It provides certainty of really responsible management. It makes impossible any disturbing attempts at interference by minority stockholders, which is a reasonable and practical consideration to be recognized frankly and at times properly. It concentrates on a small group the duty of putting a concern into satisfactory condition, giving them both the legal power and the moral obligation to make a real effort to that end. It makes it possible for those in control to formulate a well-considered program for the conduct of the business with the assurance that they may remain unhampered until the wisdom or futility of their plans has been demonstrated." [15]

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[10] Of the three voting trustees of the International Harvester Corporation, two represented the two largest competitors—for a generation antagonistic to each other—and the third was a representative of the bankers who supplied working capital.

[11] When, for example, French or Dutch bankers have large blocks of stock registered in their name and in turn issue their own certificates for local circulation. There is an instance of this kind involving a double voting trust, as one might say. The Oregon Railroad and Navigation Company's voting trust agreement provided that practically all the stock was held by the Central Trust Company of New York, which issued the usual voting trust certificates. Some of these certificates were then deposited with the Deutsche Treuhand-Gesellschaft of Berlin which in turn issued its own certificates for local circulation in Germany.

[12] See Bridgers v. First Nat. Bank, 152 N. C. 293 (1910). In this case the bank had lost public confidence because of the rumored control by one man and its deposits were declining. The scattered majority joined together and adopted the voting trust as the best way of publicly asserting their control through responsible representatives.

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[13] Excellently expressed is the first reorganization plan of the United States Shipbuilding Company. (Quoted by Cushing, H. A., Voting Trusts, 16 [1915]). "To assure continuity in the management of the new corporation for a sufficient number of years during which the improvements and developments of all the properties of the United States Shipbuilding Company and the Bethlehem Steel Company are to be undertaken and completed."

[14] This is clearly and succinctly expressed by a sentence from the Southern Railway Voting Trust Extension circular. "The certificates for actual Preferred and Common Stock of the Company would thus be issued and dealt in in the market, making it possible for the control of the Company to be bought and sold from day to day and rendering its policy and management subject to sudden and surprising change."

How easy it is for a man with a definite plan and perseverance to secure control of the common stock of a non-dividend paying corporation is illustrated by the tactics followed by E. H. Harriman.

About 1898 Harriman was seeking to insure control of the Southern Pacific Company, the common stock of which was yielding no dividends and selling at a relatively low price. The stock traded in by the Wall Street speculators was mostly in the names of brokerage houses, and passed from hand to hand as sales were made. No one took the trouble to have the stock transferred as the stock paid no dividends.

Edwin Hawley was then one of Harriman's lieutenants. He made the rounds each day of several large brokerage houses and borrowed all the Southern Pacific that had come in. This was then transferred to names friendly to Harriman's interests and then returned to the brokerage houses. Gradually, all the floating supply of the stock had been transferred to these names, thus giving to Harr the voting control over these shares.

The advantages to all concerned of a responsible management which is publicly held accountable for its trust are too obvious to require comment. But the development of the conception of public responsibility has been of slow and recent growth, and with it has come a demand for a clear and unequivocal definition of the powers and responsibilities which the voting trustees assume. The early voting trusts were usually created without restrictions on the trustees. Their powers were those of absolute owners of the stock so long as they were in control.[16] Gradually however, as the practice became more frequent, it became common to circumscribe the powers of the trustees by restrictions contained in the original voting trust agreement.

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[15] Cushing, H. A., Voting Trusts, 98 (1915).

[16] A good example of one of these early voting trusts in which the trustees had restricted powers, was that of the voting trust of the old St. Louis, Iron Mountain and Southern Railway (1875), in which Baring Brothers and Company were vested with an absolute but temporary control of the road through the assignment to them of large blocks of the stock.

The most frequent form of restrictions is that of the limitation of subsequent issues of bonds or stocks.[17] By such limitations the original security holders are protected against the emasculation of their lien through the overexpansion of the company on borrowed capital. Less usual, but by no means uncommon, are the restrictions controlling the sale of the stock, or the consolidation of the corporation with others. When circumscribed by many restrictions, the voting trustees are merely the agents of the stockholders, their authority being limited to certain clearly defined lines of action.[18]

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[17] Thus in the Chicago Great Western Railway voting trust agreement—reproduced as an appendix in Cushing, H. A., Voting Trusts, 146 (1915)—it is provided that "The voting trustees, however, during the continuance of this agreement, shall not vote said stock to authorize or consent to any mortgage upon the property of the Company acquired under the aforesaid plan of reorganization of the Chicago Great Western Railway Company, to secure any bonds or indebtedness other than the First Mortgage Fifty-Year Four Per Cent Gold Bonds of the Company described in the preamble to this agreement, and shall not vote to authorize any increase in the amount of the authorized preferred capital stock of the Company, except in each instance with the consent in writing of the registered holders of stock trust certificates calling for a majority in amount of the preferred stock of the Company at the time outstanding." Similar restrictions are to be found in the Reading, Northern Pacific, and other notable voting trust agreements formed in connection with the railroad reorganizations of the middle nineties. More recently the limitation to the issue of superior liens has been even stronger. The voting trust agreement of the Allis-Chalmers estopped any mortgage on the property without the consent of 80 per cent of the preferred stock outstanding. To secure the consent of 80 per cent of the preferred stockholders for the issue of a lien superior to theirs, has been shown in the United States Leather case to be practically impossible. 26 Q. J. E., 85.

[18] A modern voting trust agreement specifically defining the powers of the trustees is excellently illustrated by that of the South Carolina Western Railroad, a small divisional line subsequently acquired by the Seaboard Air Line.

"No. 474 16 16 Shares

"SOUTH CAROLINA WESTERN RAILROAD

STOCK TRUST CERTIFICATE

"THIS CERTIFIES That, as hereinafter provided and on surrender hereof *John Jones* will be entitled, out of certificates delivered to the undersigned Voting Trustees under the agreement hereinafter mentioned, to receive a certificate or certificates for *Sixteen* shares of one hundred dollars ($100) each of the capital stock of South Carolina Western Railroad, unless said stock shall have been sold as provided for in said agreement, and in case said stock shall have been sold then the proceeds thereof as provided in said agreement, and in the meantime to receive payments equal to the dividends, if any, collected by the Voting Trustees upon a like number of such shares of stock received and held by the Voting Trustees under said agreement. No voting right passes by or under this certificate or by or under any agreement, express or implied, it being expressly stipulated that until the actual transfer of such stock certificates to the registered holder hereof the Voting Trustees shall possess and shall be entitled in their discretion to exercise in respect of any and all of such stock the right to vote thereon for every purpose, and to consent to any corporate act of said railway as provided in said agreement, but the

Ordinarily, voting trusts terminate after a specified number of years, five commonly,[19] or after a certain event or combination of events has happened. This event is usually the declaration of one or more dividends on the stock,[20] the assumption being that when the financial condition of the company has improved to such an extent as to justify the declaration of a permanent dividend, then the dangers which the voting trust was created to prevent no longer exist.[21]

Sometimes the voting trustees voluntarily relinquish their trust when they feel "that the purposes of our trusteeship have been fulfilled and that we are warranted in now dis-

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Voting Trustees will not vote said stock to authorize the creation of any mortgage additional to the First Mortgage dated August 1, 1910, upon the property of the Railway, or to authorize any merger or consolidation of the Company with any other company, or to authorize any increase of its capital stock, except in each instance with the consent of the registered holders of stock trust certificates calling for a majority in amount of the stock of the Railway at the time outstanding.

"This certificate is issued pursuant to an agreement lodged with the Knickerbocker Trust Company, Depositary under said agreement, and agent for the Voting Trustees, dated August 26, 1910, defining the rights of the holder hereof and the duties and liabilities of the Voting Trustees and the parties hereto. . . . Said agreement contains provisions whereby the stock subject thereto may be sold free and clear from the provisions of said agreement pursuant to the option therein mentioned at any time within three years from the date of said agreement at 125 per cent of its par value and at any time within three years thereafter at 150 per cent of its par value, and at any time within said period of six years may be sold for a less amount, with the consent of the holder of said option, and of the registered holders of stock trust certificates calling for a majority in amount of stock of the Railway at the time outstanding. No stock certificates shall be deliverable hereunder before August 1, 1920, but a majority of the Voting Trustees in their discretion may, subject to the limitations of said agreement, make earlier delivery upon not less than sixty days' notice. Upon any sale of the stock certificates subject to said agreement as above mentioned the Voting Trustees will make immediate delivery of the proceeds thereof as provided in said agreement."

[19] The customary selection of this period is attributed by Cushing to a provision of the New York statute limiting voting trusts to five years. Cushing, H. A., Voting Trusts, 20 (1915). Cushing cites, at the same time, examples of longer voting trusts.

[20] Stated as follows in the notice of the termination of the Reading voting trust. "On the first day of January, 1902, if then the Reading Company for two consecutive years shall have paid four per cent per annum cash dividend on its First Preferred Stock, and, if not, then so soon as such dividend shall be paid, and upon surrender of any stock trust certificate then outstanding, the Voting Trustees will, in accordance with the terms thereof deliver therefor corresponding proper certificates of stock of the Reading Company."

On June 15, 1904, the Board of Directors of the Reading Company declared "a dividend of two per cent upon the First Preferred Stock, payable September 9, 1904. The payment of this dividend, being the second dividend of two per cent paid during the year 1904, two dividends of two per cent each having been previously paid, during the year 1903, fulfils the condition limiting the period of the Voting Trust as above set forth, and it, therefore, becomes the duty of the Voting Trustees to arrange for the delivery of stock of Reading Company in exchange for the Voting Trustees' certificates now outstanding."

[21] An extended and elaborate discussion of the various conditions of termination of voting trusts is given by Cushing, H. A., Voting Trusts, 52-78 (1915). And a variety of original documents in connection with the termination are given as appendices. Ibid., 190-214.

solving the trust";[22] but ordinarily the trust extends until ended by limitation. Frequently it is extended longer by the consent of a majority of certificate holders.[23]

In the range of financial matters connected with corporate concerns few are subject to such conflicting legal opinions as voting trusts.[24] Two states have records of judicial opinions forbidding voting trusts. The more extreme is North Carolina, where apparently every form of voting trust, whatsoever the provocation, is illegal.[25] Even a voting trust to protect the reputation and maintain the deposits of a bank was declared illegal.[26] In New Jersey the attitude of the courts is not so extreme. While adhering to the general position that the creation of a voting trust separable from the actual ownership of the stock is "a gross violation of the public policy of this state," [27] yet the courts of that state have repeatedly admitted that a voting trust may be justified in the light of public welfare. If the interests of the public are clearly and unmistakably served through the creation of the trust, it should not be set aside on grounds of mere legal technicality.[28] This technicality rests usually upon the presumption that voting power is an inherent characteristic of stock ownership and cannot be separated from it.[29] Yet in the voting trust the trustees become the legal owners of the stock and the holders of the certificates are, strictly, merely the beneficiaries of a specific trust, the conditions of which they themselves have either created or complied with. Aside from this technical[30] objection, the courts of most states outside of North Carolina and New Jersey have accepted the voting trust as a means of expressing, in a responsible manner, the will of the majority. And unless the trust itself or the conditions under which it was created are unjust or clearly contrary to public policy, they have showed every disposition to interpret the voting trust as an entirely legal means of accomplishing the will of the majority. As already mentioned, two states, New York and Maryland, have enacted statutes which legalize the voting trust and prescribe conditions under which it may be created, and the federal court has itself resorted to this means in the case of the disintegration of the New Haven system.[31] Clearly the whole tendency of the times is to concede to the voting trust, when rightly used, a legal and social usefulness.[32]

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[22] Statement by trustees at termination of Northern Pacific voting trust.

[23] For original documents in connection with the extension of voting trusts, see Cushing, H. A., Voting Trusts, Appendix, 170-184 (1915).

[24] For elaborate discussion of the Law of Voting Trusts, see Cushing, H. A., Voting Trusts, Chap. III, 100-134 (1915).

[25] "All agreements and devices by which stockholders surrender their voting powers are invalid." Harvey v. Linville Improvement Co., 118 N. C. 693 (1896). The same view was again expressed with no less generality in Sheppard v. Rockingham Power Co., 150 N. C. 776 (1909).

[26] Bridgers v. First Nat. Bank, 152 N. C. 293 (1910).

[27] The now leading case of Bache v. Cen. Leather Co., 78 N. J. Eq. 484 (1911).

[28] See particularly the discussions in both the majority and the minority opinions of Warren v. Pim, 66 N. J. Eq. 353 (1904).

[29] This presumption is supported, historically, by the early English corporate franchises.

Clearly, too, its use is expedient. In large corporations the privilege of voting is purely theoretical. Few of the hundred thousand odd stockholders of the United States Steel Corporation, or even the thousand stockholders of a relatively small company, ever look into the affairs of their companies, and actually formulate individual opinions. Still fewer ever come to the annual meetings to express these opinions and to vote in furtherance of them. There is therefore no center of responsibility. The directors and officers can perpetuate their control through the inertia of the great body of stockholders. The voting trust centers the actual responsibility in three or five men whose control is a matter of public knowledge. They cannot shift it. Nor have they generally in the past abused their authority.[33] In the case of large railroad voting trusts their policies have been invariably wise and judicious. As a writer in the press put the matter, "in every instance prior to the reorganization of the property, the bankruptcy of the road had been due to faulty management, and it was impossible, in working out the reorganization, to secure the co-operation of the bondholders and of the stockholders (who, in the latter instance, were frequently compelled to pay heavy assessments) unless some warranty were given to these security holders that their created 'child' should be looked after by men of character until it outgrew its swaddling clothes. The only way to obtain such a warranty was to persuade men of ability and character to give their names to the enterprise as voting trustees of the stock for the initial period of years."[34]

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[30] There is another ground upon which voting trusts have been declared illegal by the courts—restraint of trade. See an early case, Fisher v. Bush, 35 Hun 641 (1885), and, later Clarke v. Cen. R.R. & Banking, 50 Fed. 338 (1892).

[31] See page 149, at the beginning of this chapter.

[32] An interesting instance of the use of the voting trust to evade the law is provided in the case of the old stock of the Central Pacific. The American management wished to maintain control, and the foreign shareholders wished to avoid the liability involved in having the stock registered in their names. Accordingly the stock was transferred to irresponsible dummies who indorsed the certificates in blank and surrendered them to English and foreign holders. These certificates bore coupons so that the foreign holders could collect the dividends directly. At the same time the dummies issued voting proxies to the directors.

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[33] There are rare exceptions—as, for example, the voting trustees of the Kansas City Southern Railway, during their administration from 1900 to 1905.

[34] *New York Evening Post,* Dec. 21, 1912.

INDEX

A

Accountancy,
  administrative policy, basis of, 3
  definition of, 3
  importance of, 3
  postulates of, 3
  presupposition of, 3
  purpose of, 4
Accounting,
  confidence in, effect on dividend plan, 80
  for bond discount, 37
  for cost of unprofitable improvements, 66
  for dividends on stocks of other companies, 32
  for losses under guarantee, 35
  for royalty charges, 36
Additions to net profits (See "Net profits, additions to")
Adjustments,
  for discounts, 31
  for wasting assets, 9
  in determining net profits, 7
Administrative policy, accountancy the basis of, 3
Assets,
  deferred, unprofitable improvements accounted for as, 68
  net, as basis of stock dividends, 102
  sale of, creation of surplus by, 45
  wasting (See "Wasting assets")

B

Balance sheet, defined, 5
Bank discount, deduction from net profits, 31
Banks, dividends on stocks of, expediency of declaring, 123
Bonds,
  discount on, accounting for, 37
  distributed as dividends, 98
  interest on,
    charges for, 32
    net profit, deduction from, 31
  Liberty, distributed as dividends, 111
  mining, sinking funds for, 135
  premium on,
    accounting for, 37, 38
    adjustments for, 39
  timber, sinking funds for, 135
Borrowed capital (See "Capital, borrowed")

C

Capital,
  borrowed,
    charges for, 29
    cost of, how paid, 37
  ease of getting, effect on dividend policy, 79
"Capital surplus" account, 47
Certificates, voting trust, 147
Changes in demand, reserves for, 69
Compensation for wasting assets, 9
Consumers' goods, regularity of earnings on, 89

D

Deductions from net profits (See "Net profits, deductions from")
Deferred assets, unprofitable improvements accounted for as, 68

Demand, changes in,
  effect on obsolescence of machinery, 22
  reserves for, 69
Depreciation, 14
  charges, distinguished from repair charges, 15
  defined, 10
  nature of, 14
  reserves for, 14
    amount set aside for, 18
    gross earnings regarded as offset to, 28
    new construction as offset to, 27
    objectionable practices in regard to, 26
    when unnecessary, 17
Discounts,
  adjustment for, when made, 31
  bank, 31
    deduction from net profits, 31
  bonds, 37
    accounting for, 37
    adjustment for, 38
Dividend policy, 72
  factors determining, 76
    confidence in accounting, 77, 80
    ease of getting capital, 79
    maintenance of dividend rate, 77
    reinvestment in business, 77
Dividends,
  bank stock, expediency of declaring, 123
  bonds distributed as, 98, 111
  expediency of declaring,
    illustrations of, 114
    manufacturing businesses, 114
    public utility, 118
    railroad, 121
  extra, 97
  on stock of other companies, accounting for, 32
  regularity of,
    advantages of, 84
    effect of type of business, 89

Dividends—*Continued*
  regularity of—*Continued*
    illustrations of, 87
    requirement of, 82
    reserves for, 86
  scrip, 99
  stock (See "Stock dividends")

E

Earnings,
  creation of a surplus from, 50
  gross, regarded as offset to depreciation reserves, 28
  overstatement of significance of, 73
  regularity of,
    effect of types of business, 89
    law of, 92
  retention of, 76
Extra dividends, 97

G

Gross earnings, as an offset to depreciation reserves, 28
Gross profits, dividends on subsidiaries' securities a part of, 32
Guaranteed subsidiary's securities accounting for losses from, 35

I

Improvements, unprofitable, accounted for as deferred asset, 68
Income,
  account, 5, 6
  net (See "Net income")
  taxation of, 112
Industrials, average annual returns from stock dividends of, 106
Instalments for sinking fund reserves (See "Sinking fund reserves, payment of instalments")
Insurance, reserve for, 60
Intercompany holdings, accounting for profit of, 32

Interest,
  bond, charges for, paid to other companies deduction from net profits, 31
  received from other companies, addition to net profit, 32
Invention of new machinery, effect on obsolescence, 22
Investment of sinking fund reserves, 138

L

Labor conditions, effect on machinery and obsolescence, 22
Liberty bonds distributed as dividends, 111
Losses under guarantee, accounting for, 35

M

Machinery, obsolescence due to,
  change in demand, 22
  labor conditions, 22
  new inventions, 22
Maintenance (See "Depreciation" and "Repairs")
Manufacturing businesses, dividends, expediency of declaring, 114
Mining bonds, sinking funds for, 135

N

Net assets, as basis of stock dividends, 102
Net income,
  addition to, annual instalment of bond premium, 39
  deduction from, annual instalment of bond discount, 38
Net profits,
  additions to,
    discounts taken, 31
    dividends on stock of other companies, 32
Net profits—*Continued*
  additions to—*Continued*
    interest received from other companies, 32
    payments for patent rights, 37
  adjustments,
    defined, 6
    in determining, 7
  deductions from,
    bank discount, 31
    bond interest, 31
    payment for patent rights, 37
    rentals, 34
New construction, regarded as an offset to depreciation reserve, 27
New machinery, effect on obsolescence of old, 22

O

Obsolescence, 21
  causes of, 22
    changes in demand, 22
    changes in social conditions, 22
    changes in style, 22
    invention of new machinery, 22
    labor costs, 22
  computation of, 24
  defined, 10
  reserve for, determination of amount, 23
Optional sinking funds, 136
Overstatement of earnings, significance of, 73

P

Paid-in surplus, 43
Patent rights, payments for,
  net profits,
    addition to, 31
    deduction from, 37
Payments,
  cost of borowed capital, 37
  patent rights, addition to or deduction from net profits, 37

Payments—*Continued*
  sinking fund reserves (See "Sinking fund reserves, payment of instalments")
Preferred stocks, sinking fund reserve, 129
Premium,
  on bonds,
    accounting for, 37, 38
    adjustments for, 39
  on stock, accounting for, 44
Producers' goods, irregularity of earnings on, 90
Profits,
  confusion in using term, 7
  gross, 32
  intercompany holdings, accounting for, 32
  subsidiaries, accounting for, 33
Promotions, voting trusts at time of, 149
Property, preservation of by repair charges and depreciation reserve, 16
Public requirements, reserves for, 65
Public utilities,
  bonds, sinking funds for, 128
  dividends,
    expediency of declaring, 118
    stock, 108

R

Railroads,
  bond issues, sinking funds for, 126
  dividends,
    expediency of declaring, 121
    stock, 107
Regularity,
  of dividends (See "Dividends, regularity of")
  of earnings (See "Earnings, regularity of")
Reinvestment of stockholders' surplus in business, 78
Rentals, charges for, 34
Reorganization,
  creation of a surplus at time of, 49
  voting trusts at time of, 150
Repairs,
  charges for, 11
    criterion of, 11
    distinguished from depreciation charges, 15
    period to which chargeable, 12
    reserve for, 12, 13
  defined, 10
Replacement charges (See "Repairs, charges for")
Reserves, 56
  changes in demand, 69
  depreciation (See "Depreciation, reserves for")
  insurance, 60
  obsolescence, 10, 21
  public requirements, 65
  repair charges, 12
  sinking fund (See "Sinking fund reserves")
  social requirements, 65
  special, classes of, 56
  taxes, 57
  to maintain regular dividends, 86
  withdrawal from, 65
Royalties, accounting for, 36

S

Sale of assets, 45
Scrip dividends, 99
Serial bonds, 141
Sinking fund reserves, (See also "Sinking funds")
  investment of, 138
  management of, 137
  of preferred stocks, 129
  payment of instalments,
    business conditions as basis of, 134
    optional, 136
    proportional, 132
    regular, 131
    varying, 132

Sinking fund reserves—*Continued*
  provisions for, 130
  use in past, 126
  wisdom of, 143
Sinking funds,
  investment of, 137
  mining bonds, 135
  offset to depreciation reserves, 26
  optional, 136
  public utility bonds, 128
  purpose of, 130
  railroad bond issues, 126
  reasons for, 125
  timber bonds, 135
  treatment of, 125 (See also "Sinking fund reserves")
Social conditions, effect on obsolescence of machinery, 22
Special reserves, necessity for, 56
Stock dividends,
  average annual return from stock dividends declared by 31 industrials from 1908–18, 106
  avoidance of misrepresentation, 103
  bank, expediency of declaring, 123
  care in declaring, 102
  industrials, 106
  justification of, 106
  net assets basis of, 102
  origin of, 101
  prevalence of policy of declaring, 106
  public utilities, 108
  railroads, 107
  taxation of, 112
  yield from, 107
Stockholders' surplus, 72
  proportion reinvested in business, factors determining, 78
Stocks,
  other companies, accounting for dividends on, 32
  preferred, sinking fund reserve, 129
  premium on, accounting for, 44
Style, changes in, effect on obsolescence of machinery, 22
Subsidiaries,
  accounting for profits of, 33
  securities of,
    accounting for, 133
    accounting for losses arising from guarantee of, 35
    dividends on a part of gross profits, 32
Surplus,
  disposition of, 54
  investment strength of, 51
  kinds of, 42
  management of, 42
  need of in business, 77
  origin of, 42
  paid-in, 43
  stockholders, 72
  through earnings, 50
  through reorganization, 49
  through sale of assets, 45

T

Taxation,
  of income, 112
  of stock dividends, 112
Tax reserves, 57
Timber bonds, sinking funds for, 135
Trusts, voting (See "Voting trusts")

U

Unprofitable improvements,
  cost of, accounting for, 66
  deferred assets, infeasibility of carrying forward as, 68

V

Voting trusts, 146
  advantages of, 152
  certificates, 147
  creation of, 147
  dissolution decree, 149
  early cases of, 146
  formation of, 147

Voting trusts—*Continued*
  legality of, 155
  origin of, 146
  promotions, at time of, 150
  public policy toward, 156
  purpose of, 146
  reorganization, at time of, 150
  responsible management, 152
  restrictions on, 153
  termination of, 154

W

Wasting assets,
  adjustments for, 9
  classification of, 9
  depreciation, 14 (See also "Depreciation")
  obsolescence, 21 (See also "Obsolescence")
  repair charges (See "Repairs, charges for")

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